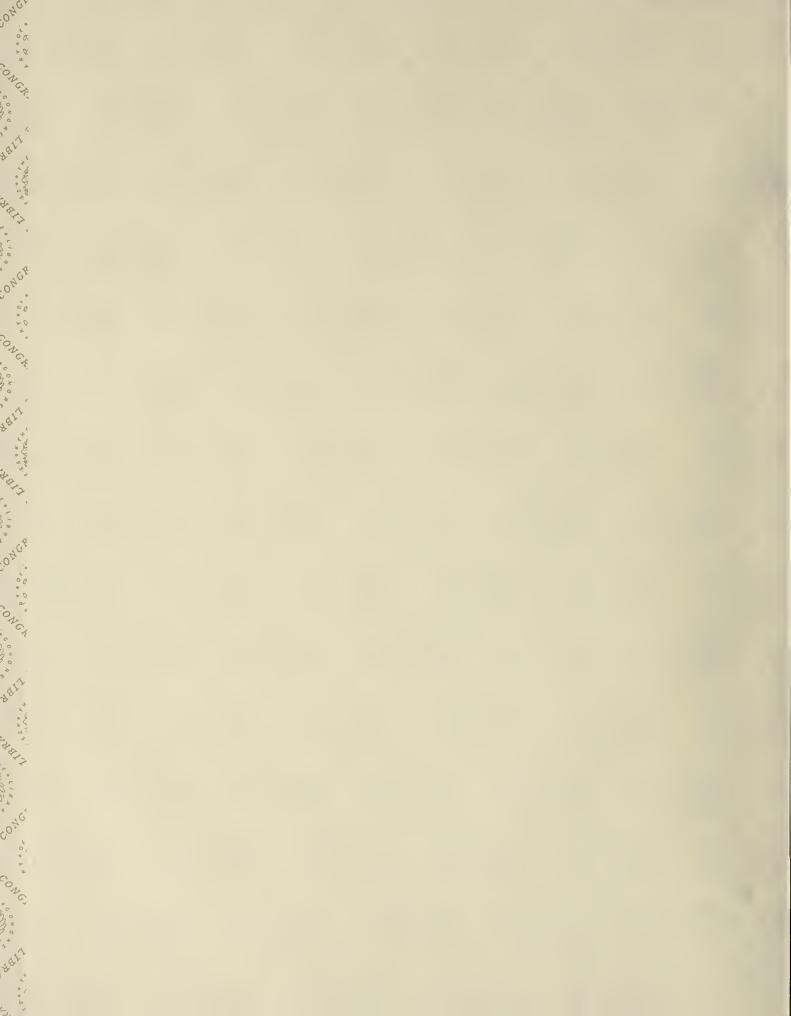
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Scanned from the collections of The Library of Congress

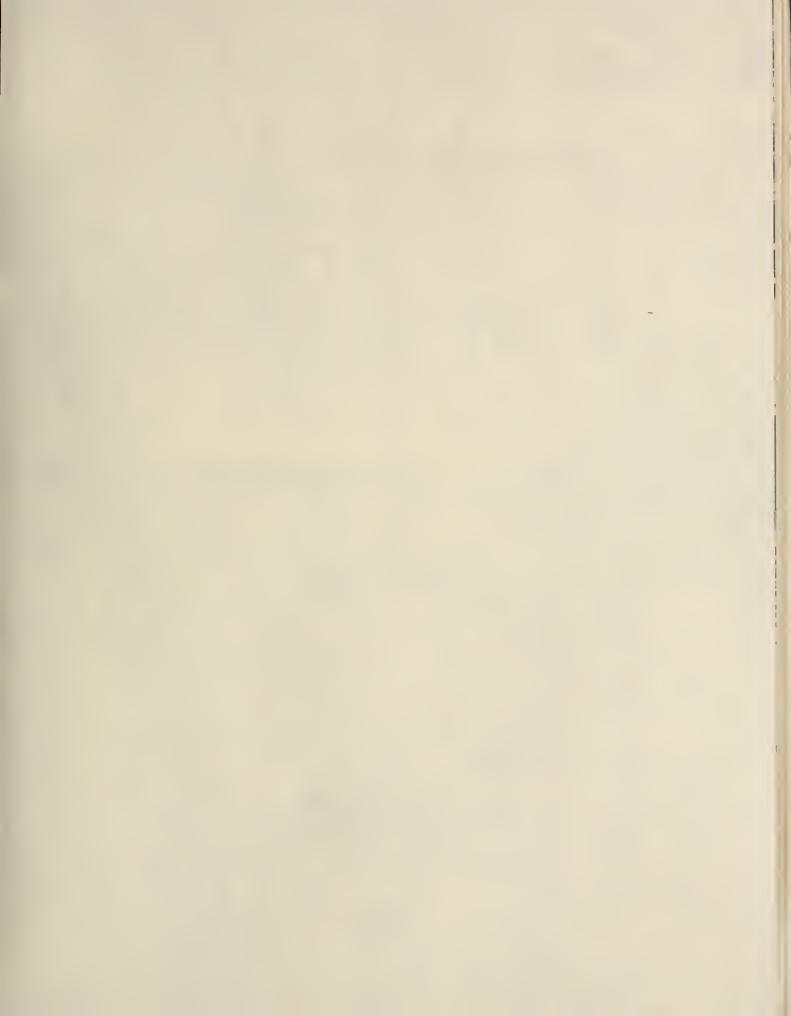


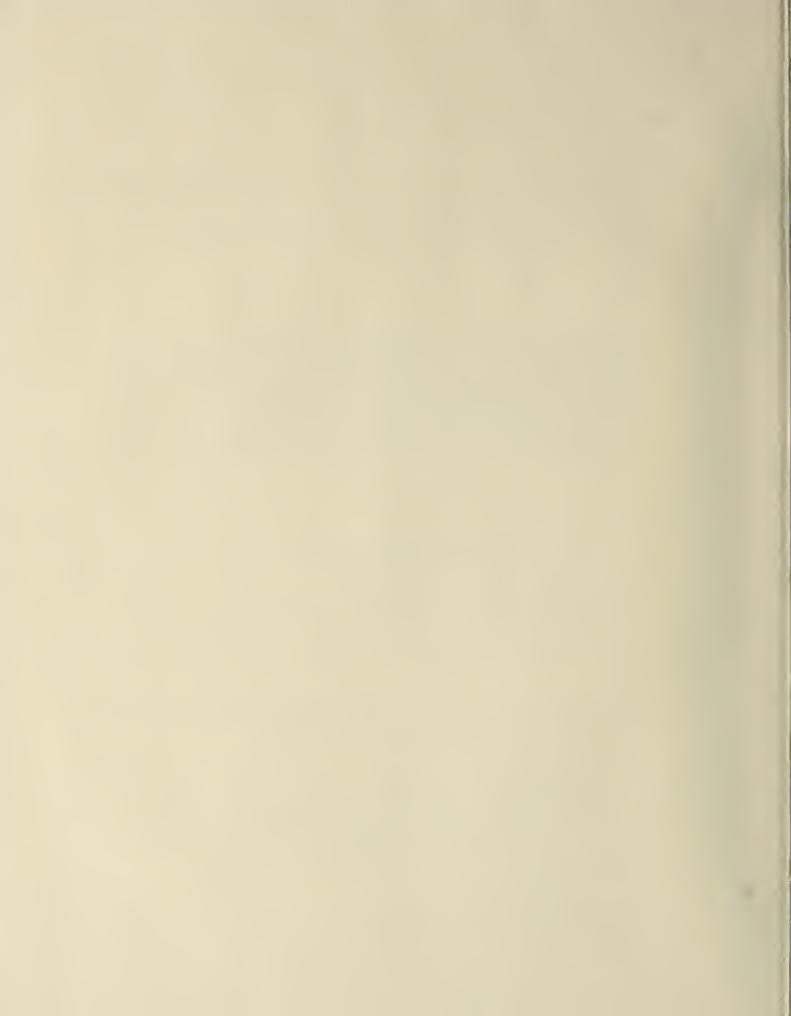
Packard Campus for Audio Visual Conservation www.loc.gov/avconservation

Motion Picture and Television Reading Room www.loc.gov/rr/mopic

Recorded Sound Reference Center www.loc.gov/rr/record







BELL & HOWELL BELL & HOWELL STATES OF THE ST

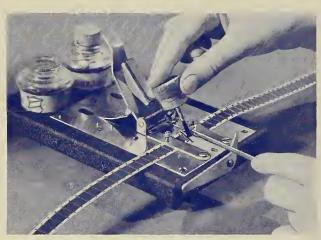
8; 2-3



FEBRUARY - MARCH 1932

Easy as making children's cutouts

Cutting the film with the famous B & H Splicer. Note the pilot pins that hold film in the correct position, and the simplicity of the operation.



Spreading a layer of film cement on the film, preparatory to pressing the ends together with the clamp.





(At right) B& H Film Cement, identified by the blue and gold label, was especially developed for most effective splicing of safety film. Contains only highest quality chemicals. Furnished in 1-ounce non-tipping bottle with combination cork and brush. One bottle is furnished with each splicer outfit. Additional bottles, 25 cents.

(At left) The Cooke 15 mm. F 2.5 Lens in Focusing Mount—A new Cooke lens which is even more useful than the Cooke 15 mm. F 2.5 universal focus lens, a most popular unit since its announcement last July. The new lens can be focused on objects as close as 8 inches. The universal focus lens is sharp at from five feet to infinity. Both lenses, at only 25 feet, include a picture area 16½ feet wide! These are the only lenses of their focal length that do not interfere with the rotation of the Filmo 70-D turret head. The focusing mount lens, \$55. The universal focus lens, \$45.

and the splice as it should be

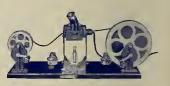
Splicing is easy... as easy as making children's cutouts... when you use a Bell & Howell Diagonal Splicer.

Pilot pins hold the film in precisely the correct position for each simple operation. Just push the blade to cut each film end on a diagonal. Scrape off the emulsion from one film end. Brush on a little film cement, close the pressure clamp . . . and there you are. Actually, telling about it takes longer and sounds more formidable than doing it.

And the splice is as it should be . . . virtually as strong and flexible as the original film. The diagonal splice gives more bonding area, leaves the perforations intact and uninjured, and distributes the pull of each pair of projector sprocket teeth so that one tooth engages on one side of the splice, its mate on the other side. No film stiffness to cause trouble while running through the projector, no pulling apart so that you must stop in the middle of a showing for repairs.

This diagonal splice is the basic feature of all Bell & Howell 16 mm. film splicing equipment, the Combination Rewinder and Splicer and the B & H Film Editor as well as the simple Splicer. With such fine and convenient splicing equipment offered, there's no reason why anyone should be content with poor splices in film, no reason to show a brief 100 feet when assemblies in 400 foot reels are so easily made. And the simple B & H Splicer costs only \$7.50. See the nearby Filmo dealer.

B & H Film Editor—With the B & H diagonal splicer on the base, this complete editing outfit offers also a magnifying, illuminating picture-viewer and a two-way geared rewinder. B & H Film Editor, complete, \$40. B & H Combination Rewinder and Splicer, \$14. Rewinder only, \$6.





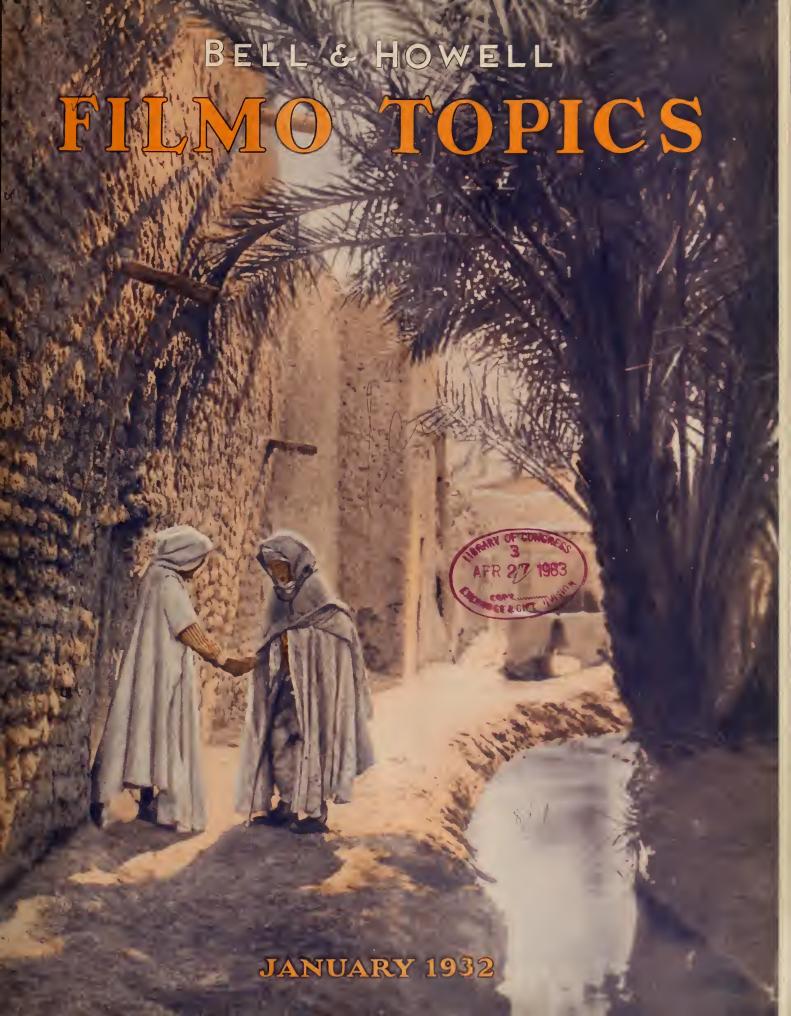
The diagonal splice made with all B & H 16 mm. film splicers. Notice that one perforation of the pair is on one side of the splice while the companion perforation is on the other side.

BELL & HOWELL

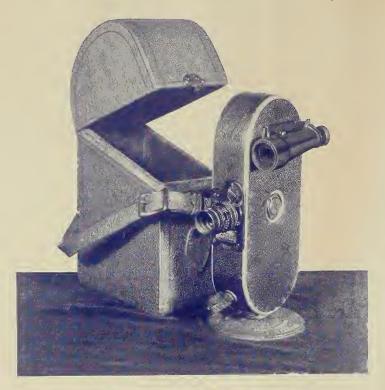
FILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

Bell & Howell Co., 1842 Larchmont Ave., Chicago; New York, Hollywood, London & H Co., Ltd. Established 1907.



New Parallax Viewfinder gives new efficiency to FILMO 75



Now, both efficiency and convenience of the Filmo 75 Field Model Camera are greatly enhanced by a new Parallax Viewfinder.

This new unit gives a brilliant view of the 20 mm. lens picture area—an image approximately 3 times larger than that of the regular built-in view-finder. It is detachably mounted on the camera door, near the top. A simple slide device adjusts the field area to coincide exactly with that of the lens for distances from 2 feet to infinity. Detaching from and attaching on the door mounting is only a matter of seconds. Or a special carrying case

is offered, so that the viewfinder can

be left permanently mounted.



The regular builtin finder will of course be continued. New Filmo 75 Cameras may be purchased with or without the Parallax finder.

Filmo 75 Cameras now in use can be easily equipped with it, simply by sending the camera in to the factory or nearest branch to have a mounting plate attached. Prices:

Parallax Finder (including mounting on your door).....\$ 15

New Filmo 75 complete with Parallax Finder and Special Carrying Case.....\$11

Carrying Case for Filmo 75 with Parallax Finder.....\$ 11



The B & H Combination Filter Set provides two amber glass uniform filters, 2x and 4x, in one sliding selective mount. Also, it provides an amber glass graduated filter ranging from clear glass to 6x density, which fits smoothly into the Duplex holder. It meets every ordinary requirement for color correction with 1" F 3.5 Cooke Universal Focus, or Focusing Mount Lens for Filmo 70. In compact case, \$5.75.



The B & H Uniform Filters are for the many scenes that require a general color correction. They are offered in various densities for every lens supplied for Filmo 70 and 75 Cameras. They are of yellow dyed optical glass of excellent quality, and screw into lenses. Prices \$2.50 to \$7.50.



The B & H Model A Photometer for movies is specially calibrated for all

Filmo Cameras. It gives correct exposure readings in 10 seconds. Easy to operate as a flashlight. Price, \$17.50 (Case, \$2.50.)

The B & H Model B Photometer (scale shown above), for still photography; gives lens stop readings at shutter speeds from 1/250 second to 32 seconds, and readings for filter factors and emulsion speeds. Price \$17.50 (\$20 with case).

BELL & HOWELL

FILMO

Bell & Howell Co., 1842 Larchmont Ave., Chicago, New York, Hollywood, London (B & H Co., Ltd.) Est. 1907

BELL & HOWELL

FILMO TOPICS

Published monthly in the interests of personal motion picture makers by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

JANUARY, 1932 VOLUME 8 NUMBER I

FILMING MAHATMA GANDHI

JAMES A. MILLS

OF THE thousands of public men I have filmed or interviewed, none has been more difficult to handle than Mahatma Gandhi, that curious combination of politician, mystic, philosopher, saint, and seer, who is fighting for the freedom of 360,000,000 Indians. Although there is nothing in the Hindu religion (as there is in the Mohammedan creed) which forbids a person to have his image reproduced, Mr. Gandhi took a solemn vow, some thirty years ago, that he would never pose for a photograph, a painting, sculpture, or any other artificial reproduction of himself. This is part of the amazing doctrine of self-

effacement, simplicity, and modesty which he practices.

He hates everything mcchanical-cameras, phonographs, radios, typewriters, railroads, automobiles machinery of all kinds. His theory is that machinery is the curse of modern civilization. He maintains that the mechanization of life has brought India's teeming millions of impoverished peasants to the brink of starvation and hopelessness. He believes the cconomic salvation of those multitudes rests in the revival of the ancient art of hand spinning and hand

EDITOR'S NOTE: Mr. Mills. who is a Staff Correspondent of The Associated Press, is said by his colleagues to be closer to Mahatma Gandhi than any other foreign correspondent. He accompanied Mr. Gandhi to London from Bombay and made many thousands of feet of film of India's Apostle of Peace which were shown throughout the world. A veteran user of both Bell & Howell Filmo and Eyemo cameras, Mr. Mills appeared in the first "Talkie" ever made by Mahatma Gandhi when he interviewed the great Indian rebel in an empty schoolhouse at Borsad, India. Thirty years ago Mr. Gandhi took a solemn vow that he would never pose for a photograph. He kept the vow sacredly -until Mr. Mills came along with his FILMO

and EYEMO, when Mr. Gandhi capitulated.

The author filming Mahatma Gandhi aboard the S. S. Rajputana enroute to London while the apostle of peace busies himself with his spinning wheel

weaving. That is why he has adopted the spinning wheel as his own symbol of activity. He wants a spinning wheel placed in every home in India, so that the peasants may no longer be dependent upon the machine-produced goods and clothing of England.

It was no easy task for a photographer to break down this formidable barrier of prejudice on Mr. Gandhi's part toward being filmed. But I accomplished it by simply "taking the bull (or shall I say the lamb) by the horns," and filming the Mahatma without his permission. When at first I levelled my turret-head Filmo

> and Eyemo at him, he seemed somewhat pained and displeased, but he soon became accustomed to my frequent visits. When I came within a few feet of him for a close-up, however, he would exclaim, "You are torturing me."

> On the way up from Bombay to Marseilles on the steamer, I pursued him relentlessly, because I was obliged not only to get thousands of feet of movies of him with my Filmo and Eveno, but scores of "stills" for reproduction in newspapers and magazines in the United States and

FILMO TOPICS

throughout the world. "Oh, for pity's sake," he would say plaintively, "give me some respite from those instruments of torment. You are the most ubiquitous and persistent man I have ever known." At no time, however, did the Mahatma become impatient or irritated. He has an amazingly even temperament, is exceptionally kind and tolerant, and rarely refuses anyone a request. Before the voyage was over, he was calling me by my first name, and showed so much interest in my Filmo and EYEMO that (in spite of his deep prejudice against everything mechanical) he asked to see these two magnificent specimens of the art of cinemacamera construction. He was amazed at the precision, compactness, and smooth running of the "baby" camera of the Bell & Howell products, no less than of its big brother, the "EYEMO".

Until he faced my battery of still and motion-picture cameras, I had never known Mr. Gandhi to "look at the lens". To be sure, he had appeared in photographs before, but these pictures were taken "on the fly", so to speak, and with-out Mr. Gandhi's consent, and never once did he look at the lens. Invariably he kept his eyes looking down or to the side. On the steamer, between Bombay and Marseilles, however, he actually looked squarely into the Cooke lenses of my cameras. One of the most original shots I made of him showed him holding a laughing baby, while the Mahatma himself was wreathed in smiles. Another showed him on the Captain's bridge of the "Rajputana", piloting the big liner through the Indian Ocean. A third fine shot showed the little 93-pound Hindu agitator grinning from ear to ear as I collared him at his spinning wheel.

I must say, however, that throughout the year I have been filming him, the Mahatma has practiced his own doctrine of "passive resistance" on me. Never did he willingly lend himself to pictures. Yet never did he forbid me to photograph him. Always he maintained a curiously detached, impersonal, negative attitude toward my efforts to capture his features for the screen and for history. He regards posing for photographs as a form of vanity. Although an orthodox Hindu, he believes in the Koranic injunc-

Kodacolor Projection Improved

If you want larger, brighter Kodacolor pictures with better color values, fit your Filmo Model J Projector with the new 400-watt, 100-volt, biplane filament lamp. The unprecedented even distribution of brilliant light produced by this new lamp results in a remarkable improvement in Kodacolor screening.

What do we mean by "biplane filament"? It's explained and illustrated clearly on the outside back cover of this issue—and it's a striking advance in lamp design!

tion of the Mohammedans never to allow reproduction of the human features.

In many ways, Mr. Gandhi lives the isolated, secluded, ascetic life of a saint. If I tell readers of Filmo Topics that the Mahatma ("Great Soul") never heard of Charlie Chaplin until that famous world comedian sought him out in London, they will understand how provincial and unsophisticated he is. He lives for India alone and is scarcely aware of the events happening in the outside world. Like our own great Lincoln, the Mahatma has dedicated his life to the poor, and, like the illustrious American President again, he wants to emancipate the colored races not only of his own country but of the world.

However much one may disagree with Mr. Gandhi's political principles, one cannot be in contact with him long without becoming impressed with his tremendous sincerity, earnestness, and idealism. He has suffered bitterly in the past in support of these principles, and is prepared to suffer more, he says, in the future. He has given up all his money and property to the poor, and has reduced himself to the level of India's lowliest pariah. The unlettered and pious peasantry of India regard him literally. as a Saint, but Mr. Gandhi himself discourages any such appellation. He insists he is not divinely inspired, has received no revelation from God, no message to impart to the world, but is only the "voice of India's millions of voiceless toilers", appealing to Britain and to the world for India's liberty.



Mr. Gandhi, bound for the Round Table Conference in London, learning to use the sextant with Captain H. Morton Jack of the Rajputana acting as his instructor



ASSOCIATED PRESS PHOTOS

Another intimate photo by the author — Mr. Gandhi smilingly accepting a gift of fruit from a child, one of his fellow steerage passengers

JANUARY 1932





PHOTO BY FILMO DEALER I, R. WILLIS



(Above) Passengers abourd the Canadian National Pacific Coast Steamers being entertained by motion pictures shown with a Filmo Projector. Canadian National has placed one of these machines abourd each of its steamers in the Alaskan service, and the projectors are used extensively by travelers for sereening their private films. The same is true of Filmo Projectors at Minaki Lodge, Jasper National Park, the railroad executives tell us

(Left) And here in Miami Beach, Florida, far from the scene of the picture above, we find Francis Frey taking close-ups across the table at the Club Deauville—having wisely mounted his Filmo 70-D Camera on a B & Il Tripod for the sake of picture steadiness and smoother "pamming"

(Left) These Bell & Howell cameras keep good company. As supporting evidence to that assertion, we refer you to the photo at the left, showing Richard Tauber, German tenor, filming Douglas Fairbanks aboard the North German Lloyd liner Europa



Dr. J. Berg Esenwein of Springfield, Mass., using his Filmo 70-C Camera aboard the Hamburg-American Liner "Reliance" on his fifth West Indies cruise, Incidentally, a Filmo Projector is now provided for the use of cruise travelers on this ship



PHOTO COURTESY HAMBURG-AMERICAN LINE

TIPS TO TRAVELERS

IF YOU are going abroad this winter, or whenever you do make your next trip, you will find these pointers regarding the movie making aspects of your travels well worth observing.

Film ean well be bought in this country and taken abroad; in fact, it is generally cheaper to do so because the price in foreign countries is usually the same as in the United States plus an import duty. However, if you prefer, you can purchase film at almost any of many photographic supply houses abroad, and development of their particular make of reversal film is undertaken without additional cost at numerous laboratories maintained in foreign countries by film manufacturers.

Film is adequately packed for normal use but, if a prolonged stay in a tropical area is anticipated, film should be purchased in special export packing for which there is a slight additional charge.

The United States Tariff Act of 1930, now a law, provides that motion picture film exposed abroad, whether developed or not, if of American manufacture and if not to be used for commercial purposes, may be brought into the United States duty free. This free entry may be made into the United States possessions overseas as well as the mainland, with

the exceptions of the Philippine Islands, the Virgin Islands, American Samoa, and the Island of Guam.

Before leaving the United States, register your eamera, lenses, film, etc., with the eustoms office at the port of departure, using Form No. 4455. This will save all argument as to American origin when you return.

At present there is a duty on amateur motion pieture film and equipment entering eertain foreign countries which, in the case of travelers making a personal record of their tours, is not often assessed. The experience of the great majority is that a small supply of film for personal use, together with their cameras, is admitted practically everywhere without restriction.

In some countries the traveler is oceasionally required to deposit an amount on the movie camera and film approximately equal to the import duty. This amount is refunded if the material is taken out within a specified time, usually six months.

With regard to your FILMO Camera itself, special precautions are necessary in taking eare of the lens, because moisture is very apt to condense upon it, leaving a slight deposit which will interfere with

the possibility of the finest results. This seems an unimportant point, but a dirty lens ean spoil many dollars worth of film. A Bell & Howell Lens Cleaning Kit is recommended for giving your lenses the required eare. Other than the matter of keeping the lens clean, no special precautions as to the eare of the eamera are necessary beyond the instructions issued with every instrument. Avoid getting sand, dust, or water in the mechanism.

After you have replaced your exposed film in the round black metal ease in which it comes, place this ease in your paper earton or metal sealing ease but do not reseal. If you now wrap the entire package in several layers of newspaper it will help wonderfully in preventing deterioration from moisture.

Have an oceasional roll of film processed abroad if possible, so as to afford an opportunity of cheeking your results.

(Concluded on page eight)

In the old days one got acquainted with her family thusly:



-but today it's quite a different matter

WITH YOUR FILMO IN WINTER

WHAT photographically minded person hasn't thrilled at the beauty of his surroundings after a new fall of snow? Commonplace scenes all about us become strikingly different and appealing in their garb of sparkling white, and we are anxious to take advantage of the opportunity before it passes. But here are new photographic conditions. How shall we meet them so as to get pictures that will really reproduce the beauty that inspired their production?

The first requisite is that we load our Filmo with panehromatic film. Regular "pan" will do. The extra speed of supersensitive isn't necessary outdoors except possibly very late in the day. Second, we must screw a color filter into our lensa 4x filter when the sun is low or weak, a 6x filter when it is bright and strong. Third, we must be sure to use the correct exposure for each shot. By observing these three "musts" we can expect to bring back wintry scenes that really reflect the beauty of the season.

When filming winter scenes, expose for the shadows on the snow, not for the sunlit snow areas. Side- or back-lighting of such scenes is preferable to front lighting, as it helps to bring out the texture of the snow and to give depth to the picture. Beautifully sparkling effects may be filmed by shooting almost toward the sun if care is taken that the lens is sufficiently shaded so that the sun's rays do not enter it to cause a flare.

If the principal subject of your snow scene is a person, say the children building a snow man, expose for the faces of the characters, because if you exposed for the snow in this case the subjects might be too dark for ready recognition. Calculating your exposures with a good reliable exposure meter, such as the Photometer, is the sure way.

In filming sports in which the subjects move rapidly, as coasting, skating, skiing, and ice boating, take up a camera position from which you can shoot at an oblique angle to the line of action. Fast moving objects filmed at right angles to their line of action and from fairly close by will be blurred on the screen.

Speaking of winter action subjects, the 64-speed adjustment on your Filmo 70-D Camera holds forth mighty interesting possibilities for taking slow-motion pictures of ski jumpers, fancy skaters, and



By using panchromatic film, a color filter, and the correct exposure, beautifully realistic snow seenes may be filmed

other winter sportsmen. The graceful action which characterizes these sports makes beautiful slow-motion scenes. And the occasional not-so-graceful tumbles. when filmed in slow motion, lend comedy.

INDOOR MOVIES WITH 40-CENT LAMPS

THE common 64-volt, 100-watt train lighting lamps, available now from Filmo dealers at only 40 cents each, are the latest find in home movie lighting equipment. Operated at 110 to 115 volts on your home lighting circuit, they burn with a brilliance over six times normal, giving a white light which is well suited to photography.

Besides increasing the light output, the over-voltage raises the wattage of the lamps to about 250 and cuts down their life to about one hour under average voltage conditions, although there is some variation with individual lamps. The 64volt lamps may be used in any reflectors which you have at hand: photoflash reflectors, student lamp reflectors, or inexpensive reflectors bought for the purpose. They may also be used in the ordinary home lighting fixtures: in bridge and table lamps and in wall and ceiling fixtures. Thus natural home lighting effects may be achieved with ease. Of course, care must be taken that the light does not shine directly into the lens.

What can be done with these lamps? Assuming the use of super-sensitive panchromatic film and an F 1.8 lens in your Filmo, one lamp in a reflector will furnish sufficient light for filming close-ups. Three lamps used without reflectors in your regular wall or ceiling fixtures will flood an average sized room with light so that movies can be taken of groups of four or five people. Of course the most pleasing scenes will result from careful placing of the lights so as to give modeling or roundness to your subjects, and so as to avoid deep black shadows as well as the flat effects of full front lighting.

We do not say that this is the most satisfactory kind of lighting equipment for indoor movie work, for obviously the regular 500-watt and 1000-watt lights in their reflectors and readily adjustable stands are more powerful and more adaptable and flexible. They permit covering a larger area and enable one to stop down his lens for greater depth of focus. But the 61-volt lamps are economical.

TITLING YOUR FILMS

No. 13. Applying ingenuity to title making

HARVEY F. MORRIS

HAVE you ever had the experience of trying to follow on the screen someone else's title-less films—not quite wanting to interrupt with questions, and not getting clearly what it was all about until it was all over? Or perhaps you have carefully prepared a nice talk to supplement and explain one of your own films and have succeeded in keeping it going fairly well—not much ahead of or behind the projection on the screen—until someone was unkind enough to ask a question. Then you were at once forced either to stop the projector or else fall hopelessly behind in your story.

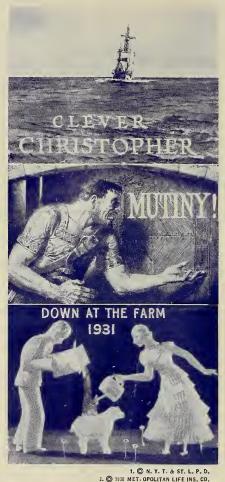
Whether they be short and simple shots of the baby or elaborate movie dramas, films need titles. Properly worded, designed, and placed, titles become a part of the picture, not an interruption in it—a welcome addition, not an unpleasant detraction.

I have a friend who has been developing a movie history of her little boy. Last summer she asked me to take some shots of her child playing on the beach. While she was getting him into his bathing suit I selected a smooth stretch of hard wet sand and with the end of a stick drew a rectangle and in it the date, like this—

AUGUST 1931

Then I stepped off a few feet until this rectangle just about filled the finder. Holding the camera level with my eye, I took a long shot down the shore, then slowly panorammed until I centered on the lettering in the sand-and I had my title. When the child arrived he was photographed against the same general background. That is what I mean by making the title a part of the picture instead of an interruption in it. The same thing could be done in winter, utilizing damp snow in place of sand. It is well to take such a title fairly late in the day when the sun is low and casts long shadows crosswise to the lettering, so as to bring it out more clearly.

I would rather photograph a sign at the



Magazine illustrations often make very appropriate title backgrounds

railroad station reading "Smithville", or a sign along the side of the road at the edge of town reading "Incorporated Village of Smithville", than use any eonventional title with the stiff and formal wording, "We Arrive at Smithville". I would rather take a few feet of a properly marked calendar, or of a speedometer or a watch, than convey the same information with a title in words. It is more artistic, more pleasing to your audience, requires more ingenuity, and is infinitely more fun.

One series of views of a friend's home and grounds showed his garden as the final scene. I had him walk in with his back to

the camera, fuss with something, turn around, smile, and walk out again, diselosing that he had planted in the flower bed a sign reading, "The End".

These "action" titles are easily arranged for and often prove quite effective. Last year I joined two large gray cards together by means of a paper hinge, and on the cover of this "book" I printed in large letters, "Our Trip to New York, 1930". Then I had our two boys sit near a window, open the book, look inside and register delight while the camera took the title on the cover and the happy faces behind it. Another shot of the boys loading hand baggage into the car-and our New York picture was off to a good start. This much was taken a week ahead of the busy morning of our departure. It could have been taken after the trip was all over.

However strong one's interest is in this type of title, there are still many that must be lettered. But the lettering can be informal, artistic, and varied. It can be as simple as writing or printing a few words with chalk on a black cardboard. What it may lack in mechanical perfection will be made up in individuality. The action of writing the sign can be taken by the camera. As the chalk can be wiped off with a damp cloth, the cardboard can be used several times.

Black lettering on a gray card is also good, and gives you a chance to add to the wording a little decorative sketch or humorous figure suggested by the scenes in the picture itself. If art work is entirely out of your line, at least you can readily find pictures on which to put your lettering. For example—a group of us had just finished our most ambitious moving picture to date - a playlet called Clever Christopher. At the first screening it was obvious that the wild gestures of the man telling Columbus that the sailors were in revolt would be perfectly unintelligible to the audience. The single word "Mutiny" lettered on an appropriate advertisement illustration clipped from a magazine remedied the difficulty.

This incident illustrates another point. You can plan all your titles ahead as definitely as you please, but don't-please don't-make any of them until you have seen the action on the screen. You will find some you have planned can well be omitted and that certain additional ones are essential.

In this same picture, we wanted a view of the bow of the boat showing the name Santa Maria (fastened on with thumb tacks). To introduce a little action, two of the sailors let down a rope over the side. On the screen it was meaningless. With a title "Six weeks out, and still-no bottom", it had some point and also bridged the gap between leaving Spain and the mutiny.

Just one more illustration of what a title can do to save a scene. At the end of the play Isabella was told to show great joy at Columbus' success, while Ferdinand, as ever was indifferent and bored. The queen and the director were equally inexperienced. She went through all the action she could think of to register pleased excitement-and still the camera clicked on and on remorselessly. At last in desperation, she cried, "What do I do next?", covered her face with her hands and laughed hysterically. Of course the scene was spoiled-until a title saved it. Looking back a few fect, we found a point where the king was evidently saying something. In the middle of this we cut in a title, "I told you so"-and everything was OK. In fact, we had a much better ending than we had planned.

Transparent celluloid gives an opportunity for many interesting and mystifying titles. In the "Clever Christopher" picture we thought it appropriate to show at the end a view of the globe. We borrowed a library globe, 24-inch diameter, mounted on a standard. For a background we secured a large sheet of buff colored compo board and cut a hole 5 inches square in the middle of it. In the center of a large sheet of celluloid we put the words "The End". An unseen hand thrust through the hole in the compo board background rotated the globe slowly while the camera took the action. Then the celluloid sheet was placed in position, bringing the title "The End" just in front of the center of the globe. Then we took a few additional feet of the globe revolving behind the stationary letters.

Titles should often come in the middle of the action, or at least just after the beginning of the action to which it refers, on the same principle that you would show a character receiving and reading a letter

before showing a close-up of the letter. Often a good scene is all too short. A title for it will prepare people to "get" it right from the start. Also a title in the middle of it will make it seem longer.

Long wordy titles should be avoided. Here is one that we had all beautifully hand-lettered, to use where Columbus gloats over the queen's jewels:

"These priceless jewels Three ships will buy— To waft me westward Till a New World I spy."

I wrote this myself and thought it was pretty good, but at the last minute it was replaced with one far better which said simply: "Three ships I'll buy."

It is advisable to take your title by artificial light, as this practice has the great advantage of controlled and standardized lighting conditions as a basis for uniformly good results. When you have a few odd feet of film in your Filmo, place your lights and photograph a typical title at different distances and at various exposures. This should give you all the data you need for getting uniformly correct results with your title photography.

To transform a film that doesn't quite "click" into a highly entertaining one by means of adroit titles is a fascinating occupation for winter evenings. Good titles help the picture. In some cases, they practically "make" the picture. Planning and executing them to get the best wording, the best point for introducing them. the most artistic treatment, the most ingenious effect and then photographing them yourself-all this. I maintain, is as delightful a pastime as filming the scenes and characters themselves.

Fine Sound Film Released This Month

Code

Reels Code

A FINE LIST of 16 mm, talkies has been added to the Filmo Library for January. The wide range of subjects is sure to provide for every need.

Pathe

Each of the Pathe subjects is on one 400 foot reel. Prices are now \$30 per reel with one disc.

Let 'Er Buck—Grantland Rice Sportlight MUHEV
Snowtime—Aesop's Fable MUKAL
Love That Kills—Vagabond Adventures MUGAH
Love's Memories—Song Sketch MULAD

Pathegrams

One reelers for the children. Price \$30 per 400 foot reel with one dise.

AESOP'S FABLES

A Toytown Tale	Mukai Mukak
Sue Hasting's Marionettes	
Santa's Toy Shop	$M_{1} _{\mathrm{KAJ}}$

Universal

Price \$30 per 400 foot reel with disc.

FEATURES

Undertow-Mary Nolau, John Mack

Mardi Gras—All Star

Brown	6	MADAW
Dames Altoy-Glenn Tryou	6	MADAK
Hide Out-James Murray, Catherine		
Crawford	6	Maday
OSWALD CARTOONS		
The Detective-The Lucky Rabbit	1	MADAZ
	1	MADEA
The Navy—The Lucky Rabbit	1	MADEB
Mexico—The Lucky Rabbit	1	MADEC
Specials		
Pilgrim Papas—Benny Rubiu	1	Марев
Leather Pushers		

FEATURETTES All Excited—George Sidney, Charlie Murray....

 $2 - M_{\rm ADEG}$ Sporting Youth Series

Hallowe'eu-All Star 2 MADER

Collegians Splash Mates—All Star.....

2 Madei Universal Comedies Brother for Sale—Sunny Jim 2 Madej

Miscellaneous Talkies

Dais

	Price	Code
Beauties the World Over		Source
Approximately 300 feet	\$ 30.00	Мивел
Bridges the World Over		
Approximately 350 feet	30.00	Мувев
Yosemite National Park		
Approximately 400 feet	25.00	MUREC
Local Talent		
Approximately 250 feet	25.00	Мивер
Red Hot Rails		
Approximately 300 feet	25.00	MI BEF
Peaceful City		
Approximately 300 feet	25.00	MUREG
Wonders of the Yellowstone		
Approximately 400 feet	25.00	Мивен
Carlsbad Caves		
Approximately 400 feet	25,00	Minei
Kilauea—Approximately 100 feet	25.00	Исвел
California Missions		
Approximately 400 feet	25.00	MUBER.
Savages—Seven Reels	210.00	Мівил
Savages of the South Seas		
Approximately 100 feet	6.50	MUBICA
Ruins of Pompeii		
Approximately 100 feet	6.50	Игвів
Life in Shanghai		
Approximately 100 feet	6.50	Игвис
Graud Canyon		
Approximately 100 feet	6.50	Мивир
Our Navy in Action		
Approximately 100 feet	6.50	MIBLE
A Daring Adventure		
Approximately 100 feet	6.50	MUBLE
Wild West		
Approximately 100 feet	6.50	Мивис
Jackie the Lion		
Approximately 100 feet	6.50	Игвен
Hollywood Today	2 8 2	2.
Approximately 100 feet	6.50	Мівії
Glimpses of Yosemite	2 ***	31
Approximately 100 feet	6.50	Игвіл

Columbia

Each of these subjects is on one 100 foot reel. Prices are \$35 per reel with disc. Falling Stars-Henry Bergman and Marcia

Events Worth Filming

Field Trials

January

4 All-American Field Trial Club, Holly Springs, Miss.

11 Pinehurst Field Trial Club, Pinehurst, N. C.

National Field Trial Club, Jackson, Miss.

February

Continental Field Trial Club, Jackson, Miss

Golf

January

2-3 Miami Open, Miami Springs Course

2 Santa Monica Open

9-11 Los Angeles Open, Riviera, Calif.

13-16 Agua Caliente Open, Agua Caliente, Mexico

25-30 St. Valentine's Tournament, Pinehurst, N. C.

Polo

February

6-30 Pacific High-Goal Handicap Tournament, Santa Barbara, Calif.

Winter Sports

February

4-13 III Olympic Winter Games, Lake Placid, New York

Skating

January

16-17 National women's outdoor championships and men's intermediates, Oconomowoc, Wis.

24 New England outdoor men's and women's speed skating championships, Hartford, Conn.

26 California outdoor championships, Yosemite Winter Club, Yosemite National Park, Calif.

Skiing

January

20 Final try-outs for American Ski team in Olympic Winter Games, Lake Placid, New York

17 Ski-Joring races, Seigniory Club, Lucerne-in-Quebec

Sled Dog Races

February

6-7 150-mile dog derby, Lake Placid, New York

Tips To Travelers

(Continued from page four)

Avoid mailing processed film across international borders, as delays and difficulties often result. Many travelers prefer to bring most of their film home with them to have it processed at a domestic laboratory with whose work they are familiar. At the date of writing, all film processed in Italy must be censored in Rome before leaving the country. This is a long procedure and should be avoided if possible by having film processed after leaving Italy. All film exposed in Mexico must be developed and inspected before leaving the country, but the authorities are more concerned with commercial than with personal films.

New Wide-Angle Lens

A NEW Cooke wide-angle lens, which will be of special interest and value to indoor movie makers, as well as to travelers, has just been put on the market. It is the 15 mm. F 2.5 in focusing mount, companion lens to the 15 mm. F 2.5 universal focus lens which, since its announcement in July, 1931, Filmo Topics, has become so widely used. These lenses, at a distance of only 25 feet, include a picture area 16½ feet wide. The new focusing lens can be focused on objects as close as 8 inches.

Missing Equipment

Filmo 70 Cameras

No. 16062. B. Lundstrom, Strandvagen 7B, Stockholm, Sweden.

No. 59470. Felix Parapiglia, Baldwin, Long Island, New York.

Filmo 75 Camera

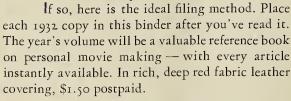
No. 51505. W. W. Kimball Co., 31 E. Jackson Blvd., Chicago.

Filmo Projectors

No. 25554. D. H. Skinner, 5566 Edmunds Street, Chicago.

No. 146070. Stanley-Warren Co., 908 Irving Park Blvd., Chicago.

Do You Keep Filmo Topics?



BELL & HOWELL COMPANY 1842 Larchmont Ave., Chicago

Questions and • Answers •

Conducted by R. FAWN MITCHELL

Viewfinder

Q. Is an attachment available for the Filmo 70-D Camera that will give a larger finder image of a telephoto lens picture area than that given by this camera's regular variable viewfinder when the latter is set for the same lens?

A. Yes, the Auxiliary Finder Unit. It is attached adjacent to the camera viewfinder tube by simply slipping it into place. Regular matched viewfinder lenses are employed, making it very easy to use this finder interchangeably for the various telephoto lenses.

Mis-framing

Q. A roll of film I recently exposed is badly out of frame, the frame line being about half way between the perforations. In many places the pictures are blurred. What is the cause of this?

A. Your trouble was probably caused by failure, when threading the camera, to leave a loop sufficiently large for the action of the intermittent mechanism. With an inadequate loop, the steady feed and pull of the sprockets would interfere with the normal stationary position of the film at the aperture. Be sure to leave loops of the size specified in the instruction book.

Lens Setting

Q. At what footage setting will my lense be placed in universal focus?

A. When set at infinity, it will render sharply focused everything up to a certain minimum distance. This is called the hyperfocal distance, and is wholly dependent on the focal length of the lens and the aperture used. Reference to a table of hyperfocal distances will give you this information. See page 25 of your Filmo Catalog.

Hyperfocal Distance

Q. Will a lens, when set at its hyperfocal distance, be in universal focus?

A. Yes, it will give sharply focused pictures from half the hyperfocal distance to infinity. However, this feature of hyperfocal distances is not used very much, except with the longer focal length lenses, where the hyperfocal point is a good distance from the camera.

Cleaning Bead Screens

Q. How can I clean my beaded screen?

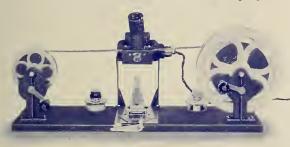
A. Dust the surface occasionally with a soft cloth. If washing becomes necessary use only lukewarm water and a mild soap, being careful, as in all handling of the screen, to avoid loosening the crystal beads.



.... Multiplying Filmo Movie Entertainment Value

Some Fine Editing and Titling Equipment

Editing and titling personal movies is like putting frosting on cake...it gives just the right flavor and zest. Editing deletes the static spots and lends form and continuity. Titling touches up the high spots with just the right, few, well chosen words. Together, they assure maximum entertainment value from your Filmo movies. Here's some fine Bell & Howell editing and titling equipment.



B & H Film Editor. Picture viewer, two-way rewinder, and splicer are all "under one roof" in this efficient and compact film editor. The viewer magnifies and illuminates the film for easy inspection as you move it along easily with the geared rewinders. Splicer block conveniently located directly beneath for quick cutting and splicing. Makes strong diagonal splice. Water and cement hottles within easy reach. B & H Film Editor, complete, \$10.



B & H Character Title Writer. With this ingenious title device, you can not only make perfect movic titles in the usual way, but you can get a variety of trick title effects. You can take a movic of your hand writing on a black background. Two powerful lamps, permanently placed, supply adequate illumination. Camera mounts on a fixed base. Compensating focuser supplied. Complete with cards, pen. ink, and carrying case, \$36.

B & H Splicer. This is the famous diagonal splicer which cuts the film on the correct angle for maximum bonding surface. This diagonal splice goes through the projector more easily too. Mounted on hardwood block. Complete with scraper, film cement, and water bottle, \$7.50.



B & II Combination Rewinder and Splicer. Geared rewind, reel support, splicer block, and cementing equipment, mounted on a common base, provide a compact device for easy and quick editing of your movie film. Attractively finished in crackleenamel, Price, \$11.



B & H Block Letter Titler Outfit. Attractive block letter titles are easily made with this block letter titler outfit. It consists of 182 wooden block letters and 17 numerals—199 pieces in all. Characters are weighted to sit upright on any flat surface. They may be had in white; and also in green, blue, and red for Kodacolor. White letters, per set, \$7.50. In red, green, or blue, per set, \$13.50.



The B & II Filmador. Here's the final solution for your film storage problem... A thermo-humidor. Keeps moisture in with rubber scaled cover and minimizes moisture absorbing temperature changes by insulating inner container from outside air. Keeps your pet films in good condition for many years. Filmador complete, \$5.

BELL & HOWELL

RILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

Bell & Howell Co., 1842 Larchmont Avenue, Chicago, New York, Hollywood, London, (B. & H. Co., Ltd.) Established 1907.



B & H Reels and Cans. B & H Reels are of extra heavy aluminum. They bear a legible and accurate film footage scale and have the famous side-tension grip which climinates necessity for threading film in the hub. Hamidor cans are of heavy ribbed construction, easily stacked, and have telltale moistener which tells you when water is needed. 100 ft, reel or can, each 75 cents.

New . . . spectacular

Bell & Howell FILMO ... Model J Projector

Theater-clear projection for all 16 mm. films

Now, with the new Filmo Model J Projector, you can have professionally smooth, theater-clear 16 mm. projection in your home or in large auditoriums. This latest and finest of all fine Bell & Howell Projectors for 16 mm. film assures increased brilliance, improved picture quality, easier operation, better performance from a dozen standpoints.

Normally the Filmo Model J Projector is equipped with the powerful 375-watt 75-volt lamp. There has recently been developed a new lamp which may be used in the Model J Projector and which gives increased brilliance. The superiority of this lamp is especially marked in Kodacolor projection for it eliminates color wedging, lost color values, all color distortion. It is a 400-watt, 100-volt lamp with 8 filaments set in two staggered rows like this • • • • • • • • . Thus intervals which formerly were filled with reflected light are now flooded with *direct* light.

The use of the Biplane Filament Lamp is made practical by the combination of highly efficient fan and aero-type cooling used exclusively in the Filmo Model J Projector. The 400-watt lamp will be supplied as regular equipment with the new Filmo Model JL Projector. Model J Projectors already in use can be equipped with this lamp at a cost of only \$6 for the lamp and \$3 for resistance adjustment.

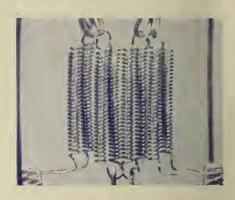
Vastly improved illumination is only one of the features which recommend the Filmo Model JL Projector to you. Other distinctive advantages are: 100% gear drive—no belts, automatic geared rewind, built-in pilot light, easy tilting, illuminated voltmeter, and radio interference eliminator, together with true Bell & Howell scientific design and precision construction which assure a long life of silent, dependable operation.

Write for descriptive literature, and see a demonstration at your Filmo dealer's. Bell & Howell Co., 1842 Larchmont Avenue, Chicago. New York, Hollywood, London (B. & H. Co., Ltd.) Established 1907.

FILMO

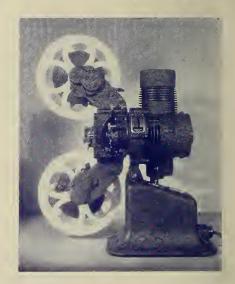
Personal Movie Cameras and Projectors

Made by Bell & Howell, the world's leading manufacturers of finest quality professional and personal motion picture equipment.



This photographic view of the filaments in the new 400-watt, 100-volt Biplane Filament Lamp shows how the light filaments are staggered to fill up all intervals and give full direct illumination.

The new Filmo Model JL Projector, with 400-Watt Biplane Filament Lamp, is priced at \$298 complete with case. Other Filmo Projectors as low as \$198.



PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL

FILMO TOPICS

Published monthly in the interests of personal motion picture makers by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

FEBRUARY-MARCH, 1932
VOLUME 8 NUMBERS 2 and 3

THE TECHNIQUE OF THE MOVIE

Suggestions which apply to any film you may shoot, from simple family records to ambitious photoplays

THE valuable suggestions on motion picture film making which are presented here are drawn from a twenty-one page monograph by Dr. H. E. Kleinschmidt on the subject "Making An Amateur Health Movie." As the author says in his foreword, "... the amateur movie is growing out of its toy stage and becoming a serious vehicle of expression. Like the use of the typewriter, the brush, or the piano, the technique of the movie is worth mastering. Here are a few elementary helps and hints." The entire monograph, though written with the problems of the health film producer uppermost in mind, is of decided value to any Filmo Camera user. We only regret that space here does not permit our presenting more of Dr. Kleinschmidt's material. However, copies of the monograph may be had, as long as they last, from the National Tuberculosis Association, 450 Seventh Avenue, New York City, for the modest price of ten cents. Mention Filmo Topics, please.

* * *

The chief advantage of the motion picture is that it enables one to record motion. Trite as that sounds, it appears not to have penetrated the minds of many amateur photographers. Armed with a distening camera, the prond owner shoots immonplace landscapes from the rear atform of a rushing train—and achieves dizzy succession of still pictures; he sweeps his camera along a line-up of In-



Burton Holmes and his camera man. Andre La Varre, with their Bell & Howell Eyemo on the He de France

dians, let us say, and shows you later a shifty panorama of a stolid row of braves, none of whom moves a muscle. In your terminology and in your thinking, stick to the term "motion picture" (a picture depicting action) instead of "moving picture" and distinction will soon become second nature to you. This medium of expression is adapted peculiarly to record motion; the motion recorded should mean

something definite which cannot as well be recorded in the still picture.

A fine canvas or a good "human interest" photograph, we often say, "tells a story." It is more precise to say that the still picture excites a single idea or a set of ideas. This idea is usually static. The movie, on the other hand, is capable of suggesting a succession of related ideas; in short, to tell a narrative. The narrative may be a simple recounting or description of a given subject, such as an historical event, or it may be a story in the usual sense, with plot and counterplot, climax, and happy ending.

The basic elements of story-telling (which will not be discussed here) apply to the motion picture drama as they do to the written form. But with this medium, the effort should be to tell the story not in word pictures nor even in still pictures, but primarily in action. Pantomime is the chief asset of the motion picture actor. The ideal silent movie is one which tells its story without a single title, and a few such notable achievements have been seen in the theater. For general purposes, however, titles are necessary but they should be reduced to a very minimum in number and in length of words.

The various ways of making actions speak for themselves are limited only by the in-



"But it's a splicer, isn't it, Dad? And Stubby'd look swell with Mother's old fur!"

genuity of the scenarist and director. For example, in an old favorite, "The Kid", Charlie Chaplin, as a ragged, carefree vagabond, is seen in a littered alley. He has just "rustled" and disposed of his simple breakfast. With the urbanity of a worldly-wise gentleman, he opens a worn, pocket cigar case, a close-up of which shows it to be filled with a motley assortment of cigar stubs. With the air of an exacting connoisseur, he fingers one and another and daintily selects the choicest "snipe" for his after-breakfast corona. For him the day is rosy! Words lack the subtlety to convey, as this simple picture episode does, the glow of satisfaction which the vagabond feels!

No scene should be left on the screen longer than is necessary to "register"; that is, to convey the intended meaning to the minds of those who see it . . . Scenes which drag on after they have told their story may be shortened by judicious cutting after having been photographed, but it is much better to plan the shot in advance, for while film footage can be shortened, sluggish action cannot be speeded up after it is photographed.

Monotony is avoided by numerous devices. Scenes may be broken up into different shots; long shots, close-ups, and scmi-close-ups. But the shots must "join" well; that is, the action at the end of a long shot must be picked up precisely at the beginning of the close-up that follows . . . When should one use the long shot, the semi-close-up or the close-up? Ask yourself, "What am I trying to show?" Then concentrate your lens on the par-

ticular object or action to which you wish to call attention and give it full value as to size and lighting. Your audience wishes to see whatever is significant, and the closer an observer can get to an interesting object, the better will he see. Hence, the long shot is used to establish location and surroundings—to orient the spectator and to convey atmosphere. The close-up is used when the story-teller wishes to concentrate attention on a particular person or object. Semi-close-ups fill the gap between close-ups and long shots. . .

Remember, too, that in any group of people the person who is speaking is the target of all eyes. Therefore, in a movie a spoken title is preceded and usually followed by a close-up of the speaker as his lips move. Dialogue is usually followed by photographing both speakers in semi-close-up, with the titles cut into the scene.

Pointing a camera hither and you and turning the crank is not photography. Each scene must be a picture in itself. That requires an appreciation of composition, and this is made more complicated in the case of the movie because actors necessarily cannot stay put. Therefore, it is necessary to plan carefully each scene and the action that is to take place. Fortunately, with the movie, you may take shots from various angles and it is not in the least disturbing to the audience if at one moment the actors are viewed from one corner of the room and at the next from a different corner, provided, of course, there is a logical break in the action. Such liberty of "photographic angles" gives us

greater latitude in composition but also calls for minute study of each shot.

One of the essentials of good composition is that the eye should be drawn to one central point of greatest interest. Similarly the action of a movie should be so planned that attention is not distracted away from the main action. The eye can focus sharply only on one action at a time. Therefore, all action, except that which is essential for the immediate occasion, should be stilled or subdued. Of course, there are occasions when the whole screen is agog with action, such as a ballroom scene, but in that case it is done to give the general impression of move ment. . .

Watch the people in a theatre and yc will notice that they sit as if fastened their seats with their eyes glued to the screen. There is not a moment of wandering. That is because the story runs alon in a continuous, unbroken thread. Or thought follows another singly and alone. but all are connected. You cannot crowd successfully more than one idea into a single scene. Titles, too, must be placed precisely where they belong in order to connect one idea with the next without a break. Continuity depends on good planning before a single picture is made and also on the editing of the film when the pieces are put together.

(In professional work) the assembler o the film makes a selection of the best shots, then with his rewinders he makes a rough assemblage of the shots in the order of their sequence in the scenario. Close-ups are cut in where they belong. Long sequences are broken up by cutting back to a related scene, and so on. The is screened and notes are taken to here and rearrange there. This process recutting, editing, and screening goes on indefinitely until the picture runs alor: smoothly. It takes a high degree of mor courage to cut a film to the bone, but I less that is done, it will surely drag. Co ting in the titles is a simple matter. title introducing a new situation precede the picture. The spoken title is usually cut into the shot of the speaker. . .

The Cover Illustration

THE cover illustration of this issue is from a photograph by the Canadian National Railways, taken at Lake of Bays, Ontario. The January cover, which we inadvertently neglected to mention, was a street scene in Algiers, by courtesy of the Hamburg-American Line.

FILMO NEWS PICTORIAL ...



Carl Brandt, Arosa, Switzerland, finds that the winter-time beauties of the Alps provide subject matter for films that one never tires of seeing. Mr. Brandt was photographed while using his Filmo 70-DA Camera while on an over night hike





Ann Harding on the set during the filming of the Pathe picture "Devotion", showing her Filmo 70-D Camera and B & H Tripod to Robert Milton, her director. The star's baby daughter, Jane, is the subject of most of her Filmo movies, though Miss Harding and Mary Astor, when working together in "Holiday", hoth used their Filmos in making their own 16 mm, silent version of that film Ann Harding on the set during the

Mr. and Mrs. Rene von Schleinitz, of Milwankee, Wisconsin, and Baden-Baden, Germany, while at St. Moritz at this time last year, Mr. von Schleinitz writes that in the eight years he has owned Filmo Cameras he has built up a film library from practically all over tameras he has built up a film library from practically all over the world which, with other films of their youngsters, are a con-tinual source of pleasure

ABOUT FILMOS WHICH WORK FOR THEIR LIVING

LIFE isn't all beer and skittles for some FILMO motion picture equipment. Or, to be more specific, not every FILMO Camera is taken on interesting tours, cruises, and vacations, or made a party to some family's happiest hours. And not every FILMO Projector finds itself dedicated to the pleasant duties of home entertainment. Yet these workaday Filmos are doing things which, though distinctly in the line of duty, are nevertheless of general interest. Witness these instances,

which we present because of their general interest, and because they may suggest to you a way to solve some business or professional problem with the aid of your Filmo equipment, and, last, because we are frankly proud of the fact that Filmo is successfully meeting the greater demands that these applications place upon its stamina and its adaptability.

An extra dividend in 1931

The Perfect Circle Company, makers of Perfect Circle piston rings, considers that its use of the Bell & Howell Filmophone was a strong contributing factor to its 1931 sales increase of 23% over 1930. This sales increase, in turn, made possible the declaring of an extra dividend-which act was news in 1931! The firm's threereel merchandising story, "The Magic Circle," was presented to more than 150,-000 people in the automotive trades. Automobile manufacturers, accessory jobbers and salesmen, and garage owners, mechanics, and service men were actually enabled to see and hear these piston rings being made, learning how they are tested in use and the best methods of selling and installing them. Encouraged by the success of its first film, the Perfect Circle Company is now showing its second sound film with the Filmophones.

In medical education

Hundreds of medical men put their Filmo equipment to professional use, and an active interchange of information is a feature of the more important professional conventions. Dr. Arthur W. Proetz, St. Louis, had so many inquiries concerning



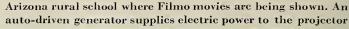
A typical audience of about 300 watching the Perfect Circle Company sound film, "The Magic Circle." shown with a Filmophone in a Pasadena garage

his excellent medical films, made with a Filmo in the Washington University School of Medicine, that he was finally prevailed upon to present a paper entitled "Amateur Cinematography in Technical Teaching," at the Omaha meeting of the Middle Section, American Laryngological, Rhinological and Otological Society. This "paper", which was subsequently published in the official journal of the Society, was presented in the form of a one-reel 16 mm. film which showed exactly how Dr. Proetz made his movies. It covered regular and animation photography, micro-cinematography, and even such details as the use of the FILMO Enlarger as a source of action stills for illustrating medical articles.

Educating young Arizonians

The use of 16 mm. motion pictures in schools is now quite a common practice, but here is an account of a Filmo Projector's educational service which is unusual. For who would expect to find movies in the isolated little frame schoolhouse pictured below? Yet Filmo movies were being shown there when this picture was taken. A generator belted to the rear wheel of the sedan supplied electric power.

Mrs. Constance Fitch Smith, Superintendent of Schools, Pima County, Arizona, feels that movies are especially essential in the rural schools of her county. "When I first came into office," she said, "I was immediately impressed by the vast amount of territory comprising Pima County and the isolation of the school districts. Some of these districts are reached by almost impassible roads. The children seldom if ever get into town, and without library and movie privileges their fund of outside information is limited. The most inexpensive and practical means of bringing the world to these districts seemed to me to be a movie machine. We are using a Bell & Howell 16 mm. Projector which gives a good clear picture in daylight."





A FEW OF WINTER'S FILMO **SUBJECTS**

H. ARMSTRONG ROBERTS

Ice boating at Red Bank, New Jersey. Here's a winter sport which provides Filmo movie subjects rich in thrilling action and glorified by the beauty of filled sails and clouds of wind-blown snow. A telephoto lens will help you get close-ups of the speeding craft from a distance

(Below) A ski-jumper takes to the air at Rockeliffe ski-jump, Ottawa, Ontario. The photographer used the correct camera angle with the result that the jumper is not blurred because he is moving at only a slight angle from the camera's line of view



Rushing around a well-banked turn on the famous Hoevenberg bob-sled run at Lake Placid, seene of the HI Olympic Winter Games. It is well to use panchromatic film and a color filter with your Filmo in filming these snow scenes



CANADIAN NATIONAL R. R.



We include this picture to remind you that close-ups add interest to any film and because no winter sport page is complete unless the sled-dogs are represented

TITLING YOUR FILMS

No. 14. Titles which include action

AN EFFECTIVE use of the B & H Block Letters for title making was brought to our attention recently by Mr. Hugh S. Davis, Tulsa, Oklahoma. Mr. Davis specializes, it seems, in filming animals, having produced over two thousand feet of film of animals in the Tulsa Zoological Garden and other zoos throughout the United States. He finds that often the Block Letters can be included right with the animals in the opening scene of a sequence, and that this method of titling adds a great deal of interest to his films. An enlargement of one title by Mr. Davis is reproduced at the right.

The facts that these letters may be stood up or laid down flat, and that they will not blow away as paper letters might, make them adaptable for use with outdoor subjects of various kinds, in addition to their many uses for the more conventional titles filmed indoors.

After reading the eleventh article of this series, in November Filmo Topics, Mr. Aimé Franche, Montreal, Quebec, decided that it was time to contribute some of his title-making ideas to the series which he had been following for so many months. And we are glad that he wrote us, for he told of two trick title ideas which we are sure you will find interesting and well worth employing when suitable opportunities occur. His first bears out the statement which we made several months ago, to the effect that there seems to be no end to the title-making possibilities based upon the trick of reversing motion by filming it upside down and then turning that film strip end for end in the finished film.

The method is this. Direct the camera, held upside down, obliquely downward at a sheet of paper bearing the title wording and placed on an angle so as to be at right angles to the camera's line of vision. After exposing sufficient film for reading time, pour ink over the sheet to cover the lettering. Then, after processing, turn this film strip end for end and splice it into your film. The screen effect: the ink seems to leave the sheet and flow into the bottle, exposing the title wording.

The second suggestion by Mr. Franche is this. Write or letter the titles on successive pages of a blank book. While the camera is operated, have someone turn the pages slowly, stopping for reading time at each title. All the titles of a reel could thus be shot without a stop except to rewind the camera. The cuting place would be just before the hand starts to turn a page. Thus the audience would see a flash of the last title, the entry of the hand and the turning of the page, then an adequate reading time would elapse while the new title remained on the screen, and then the title would be cut and the next scene would follow. This title stunt is an appropriate one for a travel or vacation film as it carries out the story motive.

Alexander Stuler, Nordlingen, Germany, has been doing some interesting animation work. While this is not strictly title making, still it calls for much the same procedure. We would like to pass on an account of Mr. Stuler's methods and an example of his results, as you may wish to try your hand at this type of work, in view of its interest and novelty, not to mention the relative ease with which it may be done. To quote Mr. Stuler: "Being a teacher, I have filmed an elementary class (children aged eight to nine) in most phases of their daily practice-writing, singing, drawing, at gymnastic exercises, and reading, too. To get variety, I linked up the pictures of the children with animated drawings.

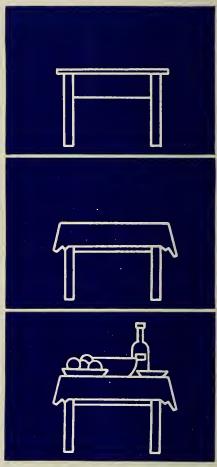
"For instance, a boy was filmed reading, his fingers following the lines. Then, by line drawings, the story he read was represented. In conclusion, a short scene of the boy at his reading was shown. Three periods of the drawing you will find with this letter (reproduced on this page—EDITOR). They illustrate in a very primitive manner (we wish we could do as well—EDITOR) the fairy tale 'Tischlein Deck Dich.' In England this story is told as 'Father Grumbler'. It relates of a very wonderful table on which appear, at its master's will, the finest dishes ever tasted, buying and cooking not necessary.

"The drawing was done with white chalk on black paper. First the bare table was drawn and filmed, then the table cloth was added and the table filmed again, and by similar stops for drawing the dishes were made to appear as by magic."

The important point to watch in work of this kind is that the camera and the pic-



Enlargement from one of Mr. Davis' animated animal titles, showing how Block Letters are included in the seene with the subjects themselves



Three stages in the animated drawing by Alexander Stuler

ture maintain exactly their relative positions throughout the filming of the entire sequence. Otherwise there may, and probably will, be a perceptible jump wherever filming was resumed after more drawing was done. A sure and simple way to maintain the identical positions is to use the B & H Character Title Writer.

Wanted-Six Dramatic Anecdotes About Filmo

II AS your Filmo had a chance to demonstrate its excellence by functioning under especially trying conditions? By continuing to produce perfect pictures after an accident that would destroy an ordinary eamera? By getting rare movies in spite of unusually adverse weather conditions?

For advertising purposes we want aneedotes about such experiences, together with permission to publish them and your name. The raconteurs of the six aneedotes which will be selected for use will receive with our compliments, as an expression of our appreciation of their efforts, a B & H Photometer or its equivalent in other Filmo accessories, as selected by the successful writers.

As an illustration of the type of story which we consider desirable, we quote below from the Filmo advertisement which appears on page one of February National Geographie Magazine:

Bounced from a speeding car . . . yet this Filmo Personal Movie Camera filmed the trip

"Col. Henry O. Silsbee, Filmo enthusiast of Lynn, Mass., touring France recently, missed his Filmo. Returning in search of it, he found that the son of the mayor of Beauvards had picked it up from the road, where it had bounced from his car. The cover was off, the case gashed, the whole covered with dirt. But cleaned and reloaded, it ran as smoothly as ever. 'Shots taken afterward,' says Col. Sils-

bee in an unsolicited letter, 'were as fine as I ever made. You may gather that I think Filmo a fine camera. I do.'"

Acceptable anecdotes can illustrate Filmo's durability, its simplicity of operation, movie making flexibility and adaptability to extremes of photographic conditions, its dependability, and perhaps the fact that Filmo is known and respected even in the far corners of the world. Don't worry about literary style — just tell us the facts.

To permit Filmo owners abroad to write of their experiences, we will make April 15 the closing date. Selections will be made, and awards distributed, as soon as possible after that date.

151 Pathe Talkies Added to Filmo Library

NE hundred and fifty-one Pathe 16 mm. sound releases have been added to the FILMO Library. Not only do the sound subjects themselves constitute a valuable addition to the already excellent supply of sound films available through this library, but the fact that Pathe is offering such a large volume of new 16 mm. talkies is an unquestionable indication of the importance producers are attributing to this sound field.

Prominent among the new Pathe subjects are 13 of the popular Grantland Rice Sportlights-all one reelers. Dude Ranching, Ski-Hi Frolics, Gliding, and Angles on Angling are just a few of the Sportlight titles. Then there are 67 two-reel comedies, among them Darktown Follies, Red Heads, Rubeville Night Club, Fifty Miles from Broadway, Carnival Review, Raneh House Blues, and Kid the Kidder. Aesop's Fables are represented by 16 onereelers, and the always interesting Vagabond Series by eight subjects, also onereelers, including such titles as Venetian Nights, The Gem of Agra, Sands of Egypt, and The Glory of Spain.

Features, ranging from six to ten reels, are listed to the number of 42. Among them are Power, starring William Boyd; Craig's Wife, with Irene Rich in the stellar role; Paris Bound, starring Ann Harding; Swing High, with Helen Twelvetrees as star, together with many other titles and stars of similar popularity and

appeal. As announced last month, Pathe sound subjects are now priced at \$30 per 400-foot reel with one disc. For March there will be another lot of fine 16 mm. talkie listings, including important Universal and Columbia releases.

Sound Film Catalog

A COMPREHENSIVE catalog of 16 mm. sound pictures available through the FILMO Library has just been issued by the Library Division of the Bell & Howell Co. Approximately 500 subjects are listed, covering a wide range. Many are strictly of an entertainment nature, while others are educational and informative. The catalog will, therefore, be of interest not only to users of sound equipment in the home, but to many others also, including educators everywhere. Many business eoncerns will find here excellent material to serve as a sort of appetizer in conjunction with their industrial sound picture presentations. All subjects listed are sound on disc. A copy of the catalog, consisting of 33 mimeographed, bound pages, will be sent on request.

The B & H Film Cleaner may now be had for use on Filmo Model J and JL Projectors. The price, \$13.50, is the same as for the similar unit for Filmo 57 Projectors. This accessory is an excellent investment for anyone who prizes his films and wants them projected at their best.

Cine Titling and Editing

CINE TITLING AND EDITING" is the title of a new book, No. 2 of the Cine Amateur Series, by Herbert C. McKay. This informative handbook presents, briefly and clearly, a wealth of material about composing titles, preparing the cards, filming them, and making trick titles. Another section tells how to edit films, explaining both the mechanical operations involved and the ways and means of building up a story from scenes as they come from the camera. The volume may be had from Filmo dealers at \$1.00. It will prove to be a good investment for anyone who does, or aspires to do, his own film editing.

Where to Get 16 mm. Prints from 28 mm. Negatives

PERHAPS other Filmo Topics readers, like Mr. E. A. Gardner of Rochester, N. Y., have old-time 28 mm. films from which they would like to have 16 mm. prints made. Mr. Gardner spent much time in efforts to locate a laboratory equipped to handle this work for him. Then, having succeeded, he wrote and suggested that we publish the name and address to save others from the necessity of making private searches. Mr. George W. Colburn, 7228 N. Clark St., Chicago, does the 28 to 16 mm. reduction work. He is also equipped to reduce 17.5 mm. film to 16 mm.

New ELECTROPHOT *Photo-Electric*Exposure Meter



HERE is an exposure meter which is entirely automatic. Merely point it toward your subject, remove a cap, press a button, and a photo-electric cell inside the meter measures the light. The cell actuates an arrow on the dial which gives the exposure reading in the F system of lens stops. Then set your Filmo Camera lens accordingly, and shoot. There is provision for modifying readings for other-than-normal camera speeds, and for filter factors.

The new model is smaller than the former one—it will fit into a film compartment in your camera case. And it has a viewfinder to aid you in pointing it directly at your subject.

Price, in the United States, \$30, including leather case.

After You've Read FILMO TOPICS . . .

. . . slip it into this convenient, attractive binder, so that it will always be available for reference. Twelve metal rods are provided, and each will hold an issue of *Filmo Topics*. Order your binder now, before any of your



Topics issues become misplaced. The cost? Very little for a binder of its quality. Only

\$1.50 Postpaid

BELL & HOWELL COMPANY 1842 Larchmont Ave., Chicago

Events Worth Filming

Field Trials

February

22 Mid-West Association, Claremore, Oklahoma

29 National Champion Association, Grand Junction, Tennessee

Golf

February

11-14 St. Valentine's Tournament, Miami Biltmore Course, Florida

20-22 Washington's Birthday Tournament, Del Monte, California

22-26 Dixie Amateur, Miami, Florida

Polo

February

6-30 Pacific Coast High-Goal Handicap Tournament, Santa Barbara, Calif.

27-March 12 Pacific Coast Open Championship, Del Monte, California

March

19-April 2 Pacific Coast Circuit Championships, Pasadena, Calif.

Motor Boating

March

15-16 Col. Green Trophy Races, Miami Beach27 Sir Thomas Lipton Trophy and other races, Palm Beach

Winter Sports

February

17-18 International Figure Skating Championships, Montreal, Canada

19-20 International Speed Skating Championship. Lake Placid, N. Y.

20 Exhibition Ski Jump, Seigniory Club, Lucerne-in-Quebec

21 Figure Skating Exhibition, Seigniory Club, Lucerne-in-Quebec

22 Post-Olympic International Bobsleigh Races, Seigniory Club, Lucerne-in-Quebec

Horse Races

Jan. 1-Mar. 19 New Orleans, La. Jan. 14-Feb. 27 Hiahleah Park, Miami, Fla. Feb. 22-Mar. 19 Coral Gables, Miami, Fla.

Missing Equipment

Filmo 70 Cameras

No. 10959. R. L. Dank, 1088 Park Ave., New York City.

No. 22104. John A. Olson, 8024 Aberdeen St., Chicago.

No. 34219. Wm. B. Stout, 2124 S. Telegraph Road, Dearborn, Mich.

No. 40022. C. F. Gallagher & Co., Inc., 251 Fifth Ave., New York City.

No. 47193. T. L. Croswell, 1323 Division St., Vicksburg, Miss.

No. 48027. Ocean Insurance Co., 175 W. Jackson Blvd., Chicago.

Questions and • Answers •

Conducted by R. FAWN MITCHELL

Loaded?

Q. What is the best way to determine whether the camera is loaded?

A. Remove the lens and tap the starting button for one frame. If loaded, the creamy-white film may be glimpsed in the aperture as the shutter revolves. Some owners can tell from the sound of the camera operation whether it is loaded or not, but we suggest removing the lens as being the most positive method of all.

64-Speed

Q. Is there any possibility of injury to the mechanism of the Filmo 70-D through the continued use of 64 speed, and the sudden stopping from this speed?

A. No, not if the mechanism is kept properly oiled and cleaned. The stopping device is equipped with a recoil which absorbs the shock and protects the mechanism.

Parallax Finder

Q. Can the FILMO 75 Camera Parallax Finder for the 20 mm. lens be used with lenses of longer focal length?

A. Yes. The fields of other lenses can be etched on the finder objective.

Splicing

Q. When splicing my film I find that the cement frequently seals the perforations at the splice. What is wrong?

A. Your difficulty is probably caused by the use of too much cement, or possibly by the cement being old and thick.

Missing Equipment (Cont'd)

No. 57375, 70-D, with 3 Cooke Lenses—1" F 3.5, 1" F·1.5 No. 185475, and 4" F 4.5 No. 19858. San Diego City Schools, Visual Instruction Center, Balboa Park, San Diego, California.

Filmo 75 Camera

No. 147102. Notify Bell & Howell Co., Chicago.

Filmo Projectors

No. 47439. Ocean Insurance Co., 175 W. Jackson Blvd., Chicago.

No. 51819. Iver Johnson Sporting Goods Co., 466 Main St., Fitchburg, Mass.

No. 59,911. Carson Pharmacy, Danville, Ill. Nos. 146260 and 146065. Notify Bell & Howell Co., Chicago.



Here is the entire Filmophone outfit closed and ready for carrying.

The first of the two Filmophone cabinets contains the projector in sound-proof blimp, and the turntable. Merely open the case, plug into electric light socket, and thread the projector.

The sound cabinet contains the amplifier and double loud speaker units, and also compartments for reels and disc records.





In Two CONVENIENT CASES a complete FILMOPHONE TALKIE OUTFIT

NOW, Bell & Howell announces the most convenient, finest portable outfit yet offered for 16 mm. movie projection with sound . . . the new Model 117-C Self-Contained Blimp Filmophone.

This complete sound movie outfit for home, lecturing, and commercial use is easy to carry in its two balanced cases. Setting it up is easy and quick. Operation is simple. Pictures on the screen from the fine new Filmo Model J Projector are theater-clear, theater-brilliant, and may be as large as 16 feet wide; sound reproduction from the double loud speaker, similar to those used in broadcasting studios for finest reproduction, is clear and full-toned; synchronization is exact and dependable.

In one case are the projector, (Model J Projector preferred but any Bell & Howell Projector may be adapted) in its self-contained sound-proof blimp enclosure; and the turntable. In the other are the amplifier and the double loud speaker.

To set up the outfit for use, merely open one side of the case and let the turntable drop down to a horizontal position, plug into the electric current, place the amplifier and loud speaker unit at the screen and plug this into the turntable.

Volume and all other simple controls are at the hand of the operator, with the volume easily regulated for a small room or large auditorium.

Model 117-C Filmophone, complete with loud speaker and 50 foot connecting cord (but minus projector), is priced at \$415. For projector, add the price of any Filmo Projector plus \$15 for adaption.

FILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

Bell & Howell Co., 1842 Larchmont Ave., Chicago, Ill.; New York, Hollywood, London (B & H Co., Ltd.) Established 1907



B & II ALL-METAL TRIPOD holds the camera truly steady and climinates the jerky effect that results from moving the camera while taking shots. Strong enough to support a 180 pound man, light enough to carry about with case. The pam-tilt head of unique design gives pleasing smoothness and latitude of movement. Leg length adjustable. Rigid at any extension. Price, \$36. With zipper-type leather case, \$48.50.

The new Filmo... MODEL J PROJECTOR

A child can operate it in the dark... A theater would be pleased with the results....

Above all, the new Filmo Model J Projector is simple, with the simplicity of all truly fine things. A series of important improvements have eliminated all small annoyances and delays in personal movie showing. No belts or chains to forget; it is 100% gear driven. It rewinds automatically with a shift of a lever. A built-in pilot light illuminates the threading mechanism so that rethreading in a dark room is the work of an instant. Tilt is controlled by an easily accessible knob that quickly and exactly centers images on the screen. The voltmeter is illuminated. All controls are so spaced that anyone with brief experience can operate them in the dark. There is even a radio interference eliminator.

And Model J results are truly professional, with the fineness made possible by Bell & Howell's 25 years of making professional movie equipment preferred by leading professional studios everywhere. Aero-type cooling keeps the lamp-house cool with strongest lighting. A refined reflector adjustment yields brighter pictures. The lamp-house prevents leakage of light. An amazing new lens combined with other optical refinements gives more light. A crowning advance is its illuminating system, so powerful that length



Fully enclosed silent driving gears



Antomatic rewind—Just touch the clutch



Antomatic pilot light— When and where you want it



Fast F 1.65 projection lens—More light than ordinary lenses



Lamphonse light trap— No light on ceiling



The new Filmo Model J Projector is priced at \$291, complete with case. Other Filmo Projectors for as low as \$198. Filmo Cameras, \$92 and up.

of throw is virtually unlimited, and theater-brilliant pictures 16 feet and more wide can be shown, even in an imperfectly darkened room.

Behind this formidable array of improvements is the time-tried and proved Filmo Projector design, including a film movement mechanism that automatically frames steady, flickerless pictures, controls for reversing and for "still" projection, lens interchangeability, and adaptability (under Eastman license) to Kodacolor.

See this Projector at your dealer today. Have it demonstrated. Or write Bell & Howell, 1842 Larchmont Ave., Chicago; New York, Hollywood, London (B & H Co. Ltd.) Est. 1907.

BELL & HOWELL

FILMO

Personal Movie Cameras and Projector

Made by Bell & Howell, the world's leadi manufacturers of finest quality profession and personal motion picture equipme

BELL& HOWELL FILMO TOPICS



SILVER ANNIVERSARY NUMBER

APRIL-MAY 1932

Color..Speed..Distance..Close-ups

With these lenses, your Filmo gets them all



Cooke 1-inch F 1.8 Lens. With this lens and its Kodacolor filter your Filmo is equipped for full natural color. Also, the lens has the speed for successful black and white shots with the minimum of light. Complete with Kodacolor filter, as illustrated, \$75. Lens alone, \$60.

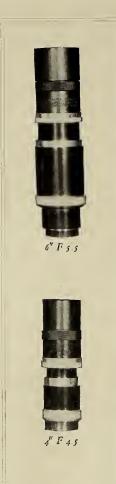
NHERENT in your Filmo Camera is the capacity for pictures in full natural color, scenes indoors and outdoors under shade or fading light, long-distance shots with the picture clear and large on the film, close-ups such as lend so much interest to professional movies.

The assemblage of lenses here illustrated enables you to take fullest advantage of Filmo's professional range. These lenses are the finest for the purpose that can be procured . . . Cooke lenses, famed for their clear definition, used exclusively by most professional cinematographers.

See your Filmo dealer to learn more about these lenses and the other accessories pictured here. Or write and let us guide you in your selection.



Filmo 75, with F 1.8 lens and Kodacolor filter, as illustrated, is the lowest priced Kodacolor equipped camera. Small, light, and compact, it is ideal for vacation and outing use. Complete for Kodacolor, including leather case, \$149.50. With F 3.5 lens for black and white, including case, \$99.50



2" F 3.5



(Left) These Cooke Telephoto Lenses open up your Filmo to intermediate and long distance shots. Prices from \$55 to \$65.

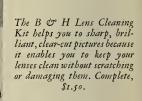


The new Cooke 15 mm. F 2.5 lens in focusing mount—an extremely wide angle lens for use in close quarters. Price \$55.

In universal focus mount, \$45.



This B & H Combination Filter Set meets every ordinary requirement for color correction with standard Filmo 70 lens. It assures black and white pictures of fine detail and clear differentiation of shadings. Complete with Duplex holder, 2x and 4x uniform amber glass filters, amber glass graduated (sky) filter, and case, \$5.75.





Bell & Howell Co., 1842 Larchmont Ave., Chicago; New York, Hollywood, London (B&H Co., Ltd.) Est. 1907

Personal Movie Cameras, Projectors, Accessories

BELL & HOWELL

FILMO TOPICS

Published monthly in the interests of personal motion picture makers by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

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NUMBERS 4 and 5

A QUARTER CENTURY OF LEADERSHIP

1907 1932

IT WAS a cold shivery night in November, 1907, in a small Indiana village . . . a village undecided as to whether it was to go back to the soil or grow into the industrial beehive which later it became.

On a grimy sheet of canvas against the side of a darkened building there raced the grotesque figures of foreign gentlemen and foreign ladies in a Louis Quinze bedroom set. The clickety-clack of a projection machine rattled down from the second story window across the way.

And what a crowd there was, standing on the cold paving! For as far as fifteen and twenty miles they had driven their rigs to see the pictures. The scenes were

strange, the comedy very French, the photography poor, the projection terrific in its flickering and jumping. But we stood there fascinated, and you could not have budged a person in the crowd with less than the burning of Rome.

One little slice of provincial America was treating itself to a new amusement. Little did it know the wretchedness of the performance. All it knew was that Life had



To go back to the earlier days of the movie industry, here's an old-time studio "still" of Mary Miles Minter facing the Bell & Howell camera

come to town, new, startling, intoxicating.

We talk of the birth of the airplane at Kittyhawk, the birth of the steamboat up the Hudson, of the telephone and the radio down in New Jersey. But the movies were born in little villages and big villages in every corner of America, where the rapt fascination of the populace inspired a mechanical genius in Chicago to help give the people more of what they wanted,

and to improve the movies immeasurably in the process. This genius was Albert S. Howell.

It was just twenty-five years ago that Albert S. Howell and Donald Bell, both of whom had been improving the motion picture projectors of that time, incorporated to operate their own cinemachinery factory.

Then, the embryonic film industry was chaotic. Many were the widths of film, and many were the sizes and the positionings of perforations. A nickelodeon entrepreneur could show, with his particular projector, only films of one standard. The many of other standards could not flicker across his screen. Now, thanks to the standards set by Bell & Howell, the one

accepted professional film can be shown in any theater in America. Yes, and in any theater in the world! And shown with a perfection in technique that makes early cinema entertainments seem crude indeed.

Their previous work upon motion picture equipment had made evident to Mr. Howell and Mr. Bell the need for standardization in films. With this need always in mind, the Bell & Howell Company built



Jackson Rose, the professional cinematographer who is seen at the crank of the early Bell & Howell studio camera in the upper photo on the next page, is pictured here as he often works today, with his personal Filmo mounted beside a modern B & H professional camera

but one type of equipment, that for handling 35 millimeter film with what they found to be the most suitable perforation. Although repeatedly asked to build equipment for handling other film, they maintained their standard. Because of the necessity for B&H machines wherever the highest quality of work was to be done, the adoption of the B&H film standard as that of the entire industry was practically forced.

In 1907, '08, and '09 the new company designed and built film perforating machines, firm printing machines, and moving picture cameras, all in accordance with their film standard. Mr. Howell's design of the film perforator introduced this standard to the industry. The mechanical perfection of this machine gained for those subsequently built acceptance wherever films are made. Bell & Howell perforators are used today in preparing 95% of the world's films, and are found in film plants throughout the world.

The first Bell & Howell Standard 35 mm. camera, built in 1909, was admitted to be ten years ahead of its time. It incorporated many then novel conceptions of design which have since become generally used throughout the industry.

Bell & Howell saw room for vast improvement in the process of printing moving picture films. At the time the company

was organized, films were printed by the slow process of handling each individual scene separately. Light changes, compensating for varying densities of the negatives, were made by rheostat and by hand. Bell & Howell's continuous film printer made possible a great reduction in laboratory work, as it was semi-automatically adjusted for varying exposures. Since every laboratory, naturally, was interested in cutting its overhead and increasing production, the B&H printer rapidly achieved the recognition and distribution of the firm's other products. Today, most of the professional film is printed with this machine—especially since the introduction of sound, with its highly exacting demands of precision.

The years from 1909 to the present saw continual refinement and perfection of equipment used in the professional industry, as well as the production of many new accessories for broadening the field of photographic and laboratory possibilities and the extensive changes in design called for by the introduction and improvement of the talkie. And this year there is being introduced a fully automatic production printer which turns out theater prints much faster and far more economically than any previous machine. What is more important, it makes possible a new superior quality of both picture and sound.

* * *

Now let's go back again to the little village in Indiana where, a quarter century ago, we saw our first movie. It's a sunny afternoon on a quiet residential street, or it's a frosty day at the ski-slide. In the hands of the leading citizens, out for sport, are held little mechanisms called Filmo Personal Movie Cameras. What has happened since we left the old home town?

Unsatisfied to stop with giving 15 million people a day a movie show to go to, Bell & Howell has turned the back yard, the golf club, the athletic field, or the deck of a liner into a Hollywood "lot"—has made it not only possible but easy and inexpensive for the individual to take and show his own movies.

It was in 1919 that the idea of personal movie making was conceived. Mr. Bell's interest in the company had been purchased in 1917 by J. H. McNabb, who at the time was general manager of the company and who is now president. Searching for larger markets, Mr. McNabb and his associates foresaw the great appeal that personal movies would make to the public. Imagine the task which then confronted the chief engineer, Mr. Howell. The proposed camera and projector would have to sell at a figure fitting the individual's purse. They had to be so simple that anyone could use them. And they had to be so perfect that the amateur could obtain professional results. For was not a high standard of motion picture quality already established in the individual's mind, directly by the feature plays seen in the theaters, and indirectly by the Bell & Howell Company itself?

Mr. Howell's inventive ability was brought into play upon this new problem. In 1921, after more than two years of constant application, of work often continued far beyond the average man's working hours, of trial, redesigning, the trial again, the first Filmo Motion Picture Camera and Projector models were born.

Even after these years of development, the cameras and projectors were not put into production on a large scale until 1922 and 1923 had been devoted to further refinement. But when the Filmo equipment was finally ready for the public it, too, met with the same enthusiastic acceptance as had Mr. Howell's preceding products. These instruments were designed to use 16 mm. film, which has been accepted as standard for amateur use, just as 35 mm. was accepted as standard for professional purposes.

APRIL-MAY 1932

Today, tens of thousands of individuals are using Filmo Cameras to make invaluable records of the activities and growth of their children, of their travels, of their vaeations-in short, of every event of interest in their lives, and are showing these intensely human films with their FILMO Projectors. Commercial enterprises are equipping their salesmen with Filmo Projectors and sales films because they have found motion pictures to be a sales medium of the most effective type. Educational institutions everywhere are using motion pictures more and more for visual instruction. And with the addition of the Filmophone, talkies are being shown with even the earliest FILMO Projectors.

Knowing the Bell & Howell Company back in 1919, you would have expected some such development as FILMO. And you would have expected them to accomplish this new job as well as they had (Continued on page ten)





THEN-

Sets were simple in the studios where the early movies were made. Property requirements were small. Action—and more action — was the outstanding characteristic of the scenarios. Directors shouted—there was no sound recorder to pick up extrancons noises. But Bell & Howell cameras were there to record what went on before them. The cincmatographer in this early studio "still" is Jackson Rose, who appears in a modern view on page two

AND NOW-

The modern studio or movie lot is quite different in size, settings, and equipment, as well as in the acting of its screen stars. The Bell & Howell cameras show great change, too, for a quarter-century has seen a vast improvement wrought in them. The evolution of the motion picture throughout these twenty-five years was in a large degree made possible by the quality of Bell & Howell cinemachinery

This photograph by Gordon Head for Paramount Pictures was taken from the rafters of a huge sound stage during the filming of "Dr. Jekyll and Mr. Hyde." It is reproduced here by the courtesy of

"American Cinematographer"

SO YOU'VE BOUGHT A FILMO!



Learn about movie making now so as to get the finest pictures of your summer vacation

SO YOU'VE bought a Filmo! Fine! You'll have a lot of fun with it, I know. And you have chosen wisely, both as to the camera and the time of buying it. It won't be long now until you leave on your summer vacation, and of course you'll want to bring back some first class movies of your trip. You've time before going to become familiar with using your camera. What you'll learn as you shoot your first few reels these pleasant spring week-ends will give you a lot of well-founded confidence in yourself and your Filmo, so that you can go about filming your vacation with assurance of fine pictures.

Perhaps you'd like a little advice as a starter in your personal movie career. Everyone likes to give advice to his friends, you know, and I'm no exception. Though there's nothing complicated about movie making with a Filmo, there are obviously some things to be learned. So, although this advice is free, don't decide immediately that it's valueless.

First let's get that new camera from its case and look it over. No, don't start to thread that roll of film into it so soon! Take it a little slow and easy, and you'll get good pictures sooner than if you barge right into it. Here in the case is an instruction book. Reading it is a more pleasant and profitable diversion than

The first of a series counseling new (and old) Filmo owners in the use of their equipment

projecting a sizeable investment in unsatisfactory films.

Now we'll look at the lens, which is especially important because it's about the only thing you have to adjust before you take a scene. Probably yours is the standard F 3.5 universal focus lens. If so, it has only one dial to be set—the lens stop dial. This dial is marked with the figures 3.5, 4.5, 5.5, 8, 11, and 16. An adjacent ring has a pointer or index mark. Turn the lens stop dial until 3.5 is opposite the pointer. Though this is the smallest figure, it indicates the largest opening of the iris diaphragm within the lens. That is, the greatest

possible amount of light is admitted when the lens is set at 3.5. The smallest amount of light is admitted at stop 16.

Lest you aren't familiar with this system of lens stops, and the upside-downness of these figures disturbs you, I'll explain. The figure 3.5 merely means that the diameter of the opening is to the focal length of the lens as 1 is to 3.5. Perhaps it will help you to remember the relativity of the lens stop figures if you will read them as fractions, thus: 1/3.5, 1/5.5, 1/11, 1/16. Then, since 1/16 is less than 1/11, stop 16 admits less light than stop 11.

These figures pertain to the relative diameters of the iris diaphragm openings. The areas of the openings, and consequently the amount of light admitted, are in direct ratio with the squares of the lens stop fractions. Example: 1/8 squared = 1/64. 1/11 squared = 1/121, which is approximately half of 1/64. Thus stop 11 admits half as much light as stop 8 or, conversely, stop 8 admits twice as much light as stop 11. (This commonly used system of lens stops is known as the F system, and the figures are preceded by the letter F to identify the system employed.)

Thus we find that: F 11 gives twice the exposure of F 16. F 8 gives twice the exposure of F 11. F 5.5 gives twice the exposure of F 8. F 4.5 is not a full stop, but an intermediate one giving about 50% greater ex-

posure than F 5.5. F 4 (not indicated on your lens but midway between F 4.5 and F 3.5) gives twice

the exposure of F 5.5. F 3.5 is another in-between stop, and gives about 50% greater exposure than F 4.5, or 2½ times as much as F 5.5.

Now don't throw up your hands in consternation at the prospect of having to indulge in arithmetic calculations whenever you prepare to film a scene. I merely wanted you to know the why and wherefore of those apparently deceiving marks on the lens. In actual practice you merely refer to the little circular exposure chart which is also there in the camera case, and set your lens as the chart directs.

Perhaps yours is a focusing mount lens. That means that the lens permits a second adjustment—this one for the distance between camera and subject. You can film most subjects with the focusing scale set at infinity. I'd keep it set there as a regular thing, returning it to that setting after it has been used at short distances for close-ups. You don't have to focus except for subjects closer than 11 feet. At lens openings smaller than F 3.5, subjects even closer are sharp at infinity. For details, see the table of hyperfocal distances on page 25 of your Filmo catalog.

Now let's practice loading the camera. The instruction book explains just how to do it correctly, and the pictures alone almost tell the story. Practice with the paper leader which is in the new camera. Then take out the paper and load the camera with your first roll of film.

Next I'd suggest that you hold the camera to your eye, using the position shown in the instruction book, and learn to hold it steadily and without swaying. It's the subjects that are to move, not the camera. Let your body form a firm tripod, with your elbows resting against your sides, the camera against your forehead, with your left eye to the viewfinder. You're ready, now, to take your first movies.

(Continued on page eleven)

APRIL-MAY 1932

FILMO NEWS PICTORIAL ...



Herbert E. Bradley of Chicago, filming natives in a vil-Herbert E. Bradley of Chicago, filming natives in a vilage in French Equatorial Africa with the B & II Eyemo Camera with which he and Mary Hastings Bradley, author, recorded their recent expedition, Both Mr. and Mrs. Bradley are lecturing on their expedition, illustrating their talks with motion pictures. The Editor will gladly put interested organizations in touch with their booking agents

(Below) W. A. Chryst of Dayton, Ohio, guest of C. F. Kettering of Detroit and New York on his yacht, taking a Filmo movie of Havana Harbor as the party a rimo move of Havana Harbor as the party arrived from Yucatan. Left to right, scated: Dr. Roy McClure of Detroit, John Pratt of New York, Edgar Gnest, famous poet, Standing, Julius Stone of Colum-kus, Ohio, Robert Lamphier of Springfield, Ill., Mr. Kettering, and Mr. Chryst



The former Prince Lennart of Sweden, now Mr. Bernadotte, since his recent marriage to Miss Karin Nissvandt, is seen here in his study in Stockholm with his Filmo Projector. The newly wed couple are living in a eastle on the shores of Lake Constance, in Germany, where Mr. Bernadotte has had built a cinema hall of his own design. Speaking of hunting, he says he dislikes to kill animals, and does all his shooting with a eamera. He owns a Filmo Camera





Dr. J. M. Nicholson, Chicago, and Mrs. Asabuki, Tokyo, tennis champiou of Japan, aboard the 8.8, Chi-chibn Maru, bound for Japan. Both are movie cuthusiasts

You can easily take and show beautiful Kodacolor movies with your present Filmo Camera and Projector

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THE 16 mm. movie maker has a number of advantages over the professional. Looming large among these advantages is this. The amateur can take full natural color movies by a three-color process, and do it with an ease and an economy and a quality of results that the professional may well envy. For before the professional embarks upon a color film project, his 35 mm. camera must be expensively equipped for a mere two-color process, and high costs are encountered at

every complicated step in his venture.

Kodacolor, the simple three-color process for the amateur, is the rich and exclusive heritage of the user of 16 mm. film. Seeing the results achieved by this process, you would expect the equipment required to be costly and the required skill on the part of the operator to be considerable. Happily, such is not the case. If you are one of the many who already have an F 1.8 speed lens for your Filmo, the only additional equipment you need for your camera is a Kodacolor filter, which costs only about one-fourth as much as the F 1.8 lens on which it is used. The regular lens on your Filmo Projector must be replaced by a Kodacolor projection lens assembly which includes the three-color Kodacolor filter, and which costs slightly over twice as much as the camera Kodacolor filter. Thus for about \$50 (in the United States) your present FILMO outfit can be fully prepared for full color photography and projection. Kodacolor film costs only 50% more than regular film, and the price includes the processing.

In taking and showing Kodacolor movies you proceed so much the same as in black and white work that any preconceived ideas of a complicated technique are quickly banished.

With so highly perfected and simplified a color process at your disposal, it is certainly to your advantage to use it. Spring-time—now—is an ideal time to start.



H. ARMSTRONG ROBERT

MOVIES IN COLOR

There is color everywhere. Color will influence you strongly, no doubt, in selecting every scene you film. Why not prepare your Filmo to record the color which is so inseparably united with the appeal of these scenes?

Consider your spring and summer movie subjects. Your children at their play, with the floral background provided by your garden. Your week-end tours through the blossoming countryside. Sunny afternoons at the lake, at your country club, and on woodland bridle paths. Canoe trips and fishing expeditions. Days afloat, sailing before a lively breeze or cleaving the waves in a fast power boat. Beach parties. Ball games. Picnics. These are bright moments which only movies can record adequately, and to which only color movies can do full justice.

A few suggestions on how to get the best Kodacolor movies are certainly in order at this season. We will not go fully into the directions, for the instruction folder which accompanies every Kodacolor outfit for Filmo is quite explicit, but will merely emphasize a few of the salient points.

Cleanliness is particularly important in Kodacolor work. Lenses and filters must be kept free from dust and finger marks. Soiled lenses and filters in black and white work impair sharpness and definition, but in Kodacolor work the color values themselves are unfavorably af-

Kodacolor close-ups are so lifelike that they alone justify your moderate investment in the special filters

•

fected by failure to keep the several units of the optical system clean.

When the Kodacolor filter is placed over the camera lens it locks the lens diaphragm wide open at F 1.8. This is necessary because stopping the lens down would cut off part or all the light passing through the blue and red color bands at the sides of the filter, and the light reaching the film would be predominantly that which had passed through the

green central band of the filter. Greens would then predominate in the resulting Kodacolor pictures.

Since the iris diaphragm is locked, there must be provided another means of compensating for differences in light intensity. Neutral density filters are supplied for this purpose. They are suitably mounted grey glass filters which absorb a portion of the light without destroying the relations of the light's component colors.

A glance at the dense three-color Kodacolor filter is enough to tell any amateur photographer that this filter itself absorbs a great deal of light. Even though the lens is used at F 1.8, the filter absorbs so much light that sunlight is needed on most subjects for normal speed operation of the camera. Have the sun almost behind you, or to the side, or three-quarter front to the subject, but not behind the subject. The sun should be well above the horizon. Take your Kodacolor shots in the period between two hours after sunrise and two hours before sunset, unless you are after such special scenes as sunsets.

To determine how to expose for a Kodacolor scene, first find the exposure which would be required for the same shot in black and white on ordinary film. Do this with your B&H Photometer or with the exposure chart which accompanied

(Continued on page eleven)

"RIP RETURNS"

A scenario outline for an all out-door moving picture comedy

HARVEY F. MORRIS

HERE is the story of a novel photoplay that can be filmed almost anywhere, any time. Only one costume need be prepared—the plain, loose jaeket and baggy knee breeches of Rip Van Winkle. Golf hose of a solid dark eolor and a pair of large buckles cut out of paper and pasted on a pair of old walking shoes complete Rip's costume. Any old slimsy dress with a long skirt will do for his wife.

The list of properties may seem long, but they are easily obtained: a gun, a powder horn (any horn), a bullet pouch (any chamois bag or leather tobacco pouch will do), a borrowed uniform of a gasoline station attendant (to fit Rip), a very small puppy, a very large dog, a couple of signs lettered on card board, a battered old copy of an "Adventure" magazine, a can of coffee substitute, a paper bag of doughnuts, a carton of doughnuts, and, for brief appearances, three automobiles.

The settings are equally easy: a gasoline station, a hot dog stand, a tourist eamp grounds, a country road, and a path through the woods, preferably hilly. The characters are Rip, his wife, five or six children, and people in the automobiles.

Opening title "RIP RETURNS." Subtitle—"The Dear Old Story Told Once More." For an impressive start, letter these titles on photographs of wooded hills or mountains.

Action: Rip, sound asleep, tilted back in a chair outside an open door. Small puppy in his lap. His gun leans against the wall beside him. Powder horn and bullet pouch hang on nails on the wall. A broom is seen sweeping just inside the door. Mrs. Rip appears sweeping doorway and then in front of the door.

When finished she looks at Rip seornfully, pokes him with her broom. He wakes up. She scolds him violently. Sends him away on an errand. Shakes fist at his departing figure. Goes into house.

Rip returns with a paper bag, a crowd of children about him. They are dirty and ragged. A pair or two of wooden shoes would help, if available. Otherwise, have them barefoot. Rip sits. Children beg to see what is in the paper

bag he carries. He gives them a quick peek, then lets one boy just hold a doughnut. Boy suddenly takes a huge bite. Rip reproves him mildly, divides the rest of the doughnut among the others. They demand more. He finally gives them all the doughnuts, empties the crumbs before the door, blows up the bag and explodes it. Mrs. Rip comes to the door, sees crumbs and empty bag where she has swept. Scolds. Children run away. She orders Rip away. He meekly takes up gun, powder horn, bullet pouch and puppy, and leaves.

General view of wooded mountains. If you are not near any mountains, get some friend to take such a view for you. Rip on a woodland path. Rip climbing up a hillside. Rip eating supper at a little campfire, among *small* trees. He drinks from a tin cup. Close-up of can of coffee substitute. He becomes very sleepy. Takes dog in his arms, lies down, back to eamera. Slow fade-out.

Slow fade-in on view of identical fireplace,



PHOTOS BY THE AUTHO

"A group of children appears. Rip gives each a stick of gom"



"He wakes. She scolds him violently"

no fire. View of Rip's back as he lies on ground among large trees. He stirs, gets stiffly to his feet, disclosing behind him a large dog. Rip has a beard. It is obvious that he has slept there for many years.

Rip, old and bent and stiff in the joints, goes down hill and along woodland path, with the old dog following him.

Rip on a public but seeluded road. An automobile comes along behind him. He throws down his gun and scrambles into the bushes or over a fence. Rip on the road again. Another car passes him going in the opposite direction. He stands beside the road and watches it eoming and going with great admiration. Rip trudging along again. A third car approaches, from behind. This one should be an open touring ear, top down.

Rip stands squarely in the road and thumbs energetically for a ride. Car stops. He scrambles in. Dog follows. He crowds into the back seat, along side of modern girls. One is smoking. Rip much

interested. He asks for a puff. Tries it and chokes. View of car disappearing in distance.

Rip and dog climb out of the car on a village street. Rip enters a bakery.

Same doorway as in first scene. Rip appears, with carton of doughnuts, huge dog, rusty old gun, etc. He peers cautiously around. More distant view shows gasoline pumps before the door. Rip stares up at the sign over the door—"Van Winkle Auto Rest." He shakes his head, puzzled. Sub-title—" I did rest"! Cut back to Rip looking puzzled.

(Continued on page nine)

MOVIES IN INDUSTRY... **EDUCATION..** MEDICINE ...

Introducing new machine

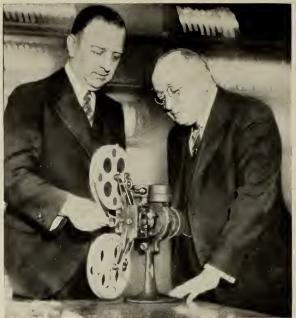
THE American Foundry Equipment Company had developed an unusual piece of sand blasting equipment, radical in design to such an extent that many of the foundrymen prospects doubted its practicability. Difficulty was experienced in explaining the features of the machine and describing its operation. So a motion picture film was produced which illustrated the mechanical features and showed various types of work being handled. Salesmen were equipped with Filmo Projectors and prints of the film. The moving picture demonstrations were enthusiastically received by customers, and a large number of sales were made.

In the grocery business

The Independent Grocers Alliance is using Filmophones and sound films to present modern merchandising methods to members throughout the country. This method has proven highly successful, due to the great impression-giving power of the combination of the motion picture and the human voice. The membership was very thoroughly covered in the course of a five-week summer convention season. In most cities one of the largest theatres was rented for the meeting, yet the Filmophones performed so creditably, and gave such excellent volume and tone quality, that they were frequently praised by professional operators.

Educators vote on projectors

An interesting "popularity contest" was conducted at the recent meeting of the National Education Association in Washington. At the Bell & Howell booth was the new Filmo M Projector, on display for the first time. Beside it was the FILMO JL Projector. Every visual educator was asked to express his opinion



of the Model M in comparison with the JL and other Filmo Projectors. The almost unanimous verdict was that if a single machine was to be bought for a school, to be used in good-sized auditoriums as well as in classrooms that cannot be effectively darkened, the most powerful and versatile of 16 mm. projectors, the JL, should be chosen. The new Model M was received with genuine enthusiasm, especially by heads of visual instruction departments in the larger cities, where hundreds and even thousands of elementary grade teachers need a sturdy, powerful machine of extreme simplicity. For

trol Model M was voted "made to order". Philadelphia schools use eighty Filmos

such use, as well as in all situations where

price is a primary factor, the single con-

Typical of the large visual education department is that of Philadelphia, where more than eighty FILMO Projectors are already at work in the schools. Dr. James G. Sigman, Director of Visual Education, has a library of over 2,000,000 feet of 16 mm. film at his disposal. In an article in the Philadelphia Evening Bulletin he was quoted as saying, "All the junior and senior high schools and 40 per cent of the elementary schools now have motion picture projectors . . . The department is still in its infancy, but is increasing the scope of its work annually . . . A new service which we have installed is the taking of pictures of outstanding events in the various schools. To date this has been chiefly confined to sports. Last year we took 40 reels of movies of track meets,

Dr. James G. Sigman, director of the Dept. of Visual Education, Philadelphia Board of Education, looking on while John G. Garman, assistant director, threads one of the department's eighty Filmo Projectors

football games, and other happenings of interest to pupils."

Medical and health films

The world's first psychol-

ogy textbook which lists FILMO-made motion pictures among visual aids to the teaching of this subject has come from the pen of Prof. Adelbert Ford, of Lehigh University. Some of the films were produced by Prof. Ford while connected with the Dept. of Psychology at the University of Michigan; others were made by Prof. William Clark Trow of the School of Education at the same institution. There are nine films altogether, ranging from 27 to 376 feet in length and covering such subjects as "Rote Learning," "Behavior of the Feeble-Minded," and "Conditioned Responses." Several Filmo 70-D's figured in the production of this material.

The listing of this type of non-medical professional film as a supplement to the second edition of the directory of medical film sources prepared by the Bell & Howell Educational Division marks a further step in the services rendered movie-making professional men. About 600 medical and health films (all 16 mm.) are listed, together with complete information on where and under what conditions they may be obtained. The directory has been warmly received by leading medical organizations, universities, hospitals, and movie-making practitioners. The directory will be sent free to medical men, educators, and health officials requesting it on official stationery.

How a FILMO Camera was adapted for and used in filming surgery of the eye is the subject of an article by Frank C. Parker, M.D., in March Movie Makers.

GOLF TAUGHT WITH MOVIES

HERE is an example of what motion pictures can do in teaching golf. It came to us in an enthusiastic letter from a California professional who for years has advocated and practiced the movie method of golf instruction. We will quote from the letter.

"In Las Vegas, Nevada, they have a golf course but as yet no pro. One of the members purchased one of your Bell & Howell Novak golf films (finally secured the complete 400-foot reel) and worked out his own golf game.

"When he demonstrated it to me it was great. He is about 55 years of age, I think, and he scored Bel Air in 92. With just a few pointers that I gave him in a lesson he played his shots really well and consistently and he was well pleased.

"He told me that he has regular gatherings at his home when the golfers get together and discuss the reels when they want to check up on their game. I think he secured a great deal from his golf reels."

Undoubtedly this player would have progressed even faster if he had had the added advantages that a professional could have brought to him by taking slow motion movies of his (the pupil's) stroke and helping him draw comparisons between these pictures and those of perfect form in

the purchased film. The incident is all the more significant because such satisfactory results were achieved even in the absence of ideal conditions.

Motion pictures are already widely recognized as an invaluable aid to the golf pro, and last season many more pros were added to the list of those who teach with the aid of the Filmo Camera and Projector. If the pro at your club has not yet adopted this method, we hope that he will do so this season, for experience has proved that movies are the greatest "assistant pro" that ever taught golf. This is not merely a biased statement by a manufacturer who has movie cameras and projectors to sell. The Professional Golfers' Association endorses and encourages the use of movies by pros, as does Golfdom, the magazine for pros, and as do many magazines which cater to golfers.



Pro analyzing a pupil's golf stroke from a Filmo slow-motion movie

What is it about the golf stroke that makes it so hard for the player to realize his faulty form . . . that makes it difficult for even the skilled pro to pick out faults and, what is more, to make the player understand what he is doing incorrectly? It's the speed at which the stroke is executed, together with the impossibility, at this speed, of checking simultaneously on all the parts of the body which are employed in the stroke. If you could only slow down the action and analyze it step by step! Slow movies let you do this!

The Filmo 70-D Camera, with its speeds ranging up to 64 per second (4 times normal) makes easy the taking of these slow motion movies. There is even a special model for golf pros which has a smaller shutter opening than the regular 70-D to aid in "stopping" the rapid action—that is, to get sharper pictures. Then,

when these films are shown with the Filmo Projector, the stroke is seen at only one-fourth its normal rate of speed. And still pictures of various phases of the stroke can be shown for prolonged study. How else could you so clearly see every detail of your play?

If you would like to interest your pro in adopting this modern method of teaching golf, write to Bell & Howell for the folder "The Greatest Assistant Pro That Ever Taught Golf." and hand it to him when you are at the club next.

Rip Returns

(Continued from page seven)

He tiptoes around the corner of the building. View of people pitching tent in a tourist camp, Rip in foreground, back to camera, watching them. Girl has trouble with tent. Rip volunteers to show her how. But he hears a familiar voice, and flees. Mrs. Rip appears in modern dress with another group of tourists. She is evidently in charge of the grounds.

Rip tiptoes around the corner of the house toward the same door. He sees something interesting on the other side and crosses over, out of range.

Rip before a hot dog stand. Small sign at side—"Van Winkle Wieners." No one else around. He picks up a roll and clamps it on a sausage. As he takes the first bite he shows dismay. Mrs. Rip appears, recognizes him, starts to scold. He hands her the carton of doughnuts. She looks inside, wavers, and embraces him.

Title—"And so—," Rip, minus his beard, but old, in the overall uniform of a service station attendant and with a beret on

his head, pours water all over the radiator of a car while he tries to listen to Mrs. Rip explaining the route on a road map to the customer.

Short shot of ear driving off. Rip waving goodbye. Mrs. Rip hurrying off, toward the hot dog stand. Rip sits in the chair beside the door. A group of children appears. He gives each a stick of gnm. They depart. He takes from under the cushion on the chair a battered copy of an "Adventure" magazine. Starts to read. Magazine drops into his lap. He sleeps, in same pose as in the opening scene.

American Cinematographer Conducts \$1000 Contest

THE American Cinematographer, official publication of the American Society of Cinematographers, is conducting a cash prize contest for 16 mm. films. The best 16 mm. picture submitted will win \$500; second best, \$250; third, \$150; fourth, \$100.

To these prizes the Bell & Howell Company has added the following: To the highest A.S.C. prize winner who made his film with a FILMO Camera, the winner's choice of a FILMO JL Projector which sells for \$298 or a FILMO 70-DA Camera with 1 inch F 3.5 focusing mount lens, which sells for \$280. To the second highest FILMO-using A.S.C. prize winner, the choice of any standard Cooke telephoto lens for his FILMO. These lenses range in price from \$60 to \$95.

Here are prizes worth working for. And your chances are as good as the next

fellow's, for the contest is only open to amateurs. No professional cinematographer is eligible to compete, and this includes the many who own 16 mm. Filmos for their personal use. Amateur clubs, as well as individuals, may enter.

The contest closes on October 31, 1932, so you have the entire spring and summer seasons in which to produce your film, and two autumn months in which to edit and title it. Only silent pictures are eligible. Entrants must be subscribers to the American Cinematographer—and in this connection we might add that this magazine carries a regular department on amateur movie making, besides much other material of interest to the personal movie maker.

Full details may be had direct from the publisher, whose address is 1222 Guaranty Bldg., Hollywood, California.

Filming From The Air

S. F. TYLER, aviator and FILMO owner of Sydney, Australia, after reading an article on aerial cinematography in a 1931 issue of Filmo Topics, was kind enough to write us about some of the things he has learned on this subject. We are glad to have the benefit of his experience to pass on to those who are interested in taking movies from the air.

"Do not take movies in bumpy air. The oscillation of the machine gives a decided flicker or indistinctness to the pictures. I get the best results in cool weather after a rain when the sky is clear of dirt, dust, smoke, and haze. A humid, hazy summer day does not yield the best results. A cloudy day is better than a

A Quarter Century of Leadership

(Continued from page three)

done cvcrything those past years. Bell & Howell have a right to call Filmo the fincst personal movie equipment on earth, because they know, as no one else knows, how to build movie machinery, and also

sunny day if there is haze in the atmosphere, because the haze is not illuminated by the sunlight and therefore does not show on the film.

"In order to keep the camera steady I hold it at half arm's length from me. Thus my arms absorb vibration which would be transmitted to the camera in the usual holding position. The view-finder can be used by peering through it from a distance. The field of view is less, but the subject can be centered.

"It is best to hold the camera stationary, rather than to panoram. Then the speed of the 'plane over the surface of the earth is clearly shown in the screened picture."

because the world confirms that statement.

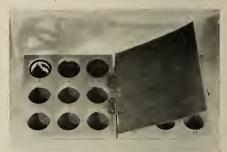
Bell & Howell Company is twenty-five years old this year. A youngster on its way. Responsive to the leadership hoisted upon its shoulders in 1907, alert, inquisitive, forever working, testing, experimenting—a youngster on its way.

Movie Makers Magazine

FILMO owners will find much of interest in the April issue of Movie Makers, official organ of the Amateur Cinema League. Included among the feature articles are the following: Achieving Effects, For Flying Filmers, Deep Sea Filming Indoors, Visualizing the Thrills of Fishing, Movies Versus Animated Snapshots, The Camera Angle, Sailing South, and Plots for Odd Shots. A sample copy may be had from the League offices at 105 W. 40th St., New York City.

A Film Editing Aid

ARTHUR W. WIGGINS, Jackson, Michigan, has made for his personal use the film editing case which is pictured here. He was kind enough to send us the case, and as we thought that others might be interested, we photographed it for Filmo Topics.



Mr. Wiggins' film editing case

Eighteen holes are provided, and each is numbered. Each film strip is rolled, as it is cut from the film, and placed in the hole bearing the number of that scene. Then, when all the cutting is finished, assembly is easy, not being complicated by searches for missing film strips. If the editor is interrupted before his job is finished he merely closes the case and puts it away, so that the job can be resumed later without disorder.



A simpler film editing board

Another Filmo owner has built a similar but simpler device to serve the same purpose. It is pictured above. (Unfortunately the name of the inventor has accidentally become separated from the print, so we cannot give credit where credit is due.) This board holds twenty film strips, and the numbers were cut from an old calendar and pasted in the bottoms of the holes. A screw-eye in the right end of the board allows it to be hung up in a closet.

So You've Bought a Filmo!

(Continued from page four)

Remember that it's moving pictures you want, not posed still pictures. What would you like to film first—the children? They're out there in the yard now, playing in their sand pile. Let's take some movies of them as they play. It's a sunny day, and the time is 3:00 P. M. The chart's subject classification "normal objects 15 to 300 feet away" best describes this subject, and the chart says to set your lens at stop F 8. Here at about 15 feet away the viewfinder shows that you can take in the entire scene. Take a shot or two from here.

Then move up to about 8 feet and take a semi-close-up, or several such shots from different angles, perhaps including only one child in each of these scenes. Close-ups call for a little more exposure than your first shot did, so for these set the lens at F 5.5, according to the chart. If the youngsters are inclined to cease all activity, freeze, and stare at you and your camera, induce them to build an annex to their sand castle, and then take your shots as they resume construction operations.

Avoid the common tendency of beginners to take scenes that are too short. Keep the camera operating long enough on each scene to expose a minimum of five feet of film. A scene given less footage will flash on and off the screen before you can grasp it. Often more than five feet will be needed to film the desired action. Five feet of film are exposed in twelve seconds. It is easy to count off the seconds as you film.

Now let's get your wife into your first reel. You can ask her to come to the back door, at your signal, and call the youngsters to her. Get beyond the sandpile so that your first scene will show the children at play in the foreground and Mrs. Thompson appearing at the door in the background. Then move up and take a full length picture of her as she calls. Then go back beyond the sandpile again and film the youngsters as they leave their play and run toward their mother. Then move up closer to catch them as they arrive and embrace her, and as they draw her back to the sandpile to show her what they have made, while you shift position again and take a close-up.

It is almost as easy to film little sequences of this nature as to take random, disconnected shots. And the resulting pictures, besides being an excellent family record, are far more interesting and appealing.

You still have thirty-five feet of film left. I'd suggest that you use it for a wide variety of subjects, as a sort of an exercise in exposures in preparation for your vacation trip. If possible, include in your list of subjects an open landscape, a shot over a lake or river, a beach scene, a close-up in a shady spot, and views of buildings in sun and shade. Follow the exposure chart, and keep notes of the light conditions and the lens stop used for each scene. Then you can study your results and, by referring to your notes, can tell how to improve the results the next time.

Editor's Note: The second article of this series, in the next issue of Filmo Topics, will be devoted to suggestions for taking vacation movies

Movies in Color

(Continued from page six)

your camera. Since differences in shutter speeds between various camera models are allowed for by the meter or the chart, you can then be guided by the following data regardless of which FILMO model you are using.

This chart is for the new super-sensitive Kodacolor film, which is twice as fast as the original Kodacolor film. The latter has been discontinued.

Lens Stop Reading Kodacolor Exposure
F 16 to F 22... Use neutral density filter No. 2
F 8 to F 11.... Use neutral density filter No. 1
F 5.5 to F 8.... Use no neutral density filter
F 4 to F 5.5.... Use half (8) speed, no
neutral density filter

Below F 4....Insufficient light for Kodacolor

Since the lens is always used at the large opening of F 1.8 in Kodacolor work, it is particularly important to focus the lens correctly for each scene. As you know, the larger the aperture of a lens, the less the depth of sharp focus. For subjects twenty feet and more from the camera the lens focusing scale may be set at infinity. For shorter distances, focus carefully.

Due to the separation of the image into fine bands by the cylindrical "lenses" embossed on the Kodacolor film, the Kodacolor process has a tendency to lose very fine detail. This is not apparent in closeups, which are very effective in Kodacolor, nor does it detract from the beauty of more distant scenes in which broad masses rather than minute detail characterize the subject. Kodacolor film should be processed as soon as possible after it has been exposed. This presents no difficulty when you are at home or on a domestic vacation—a delay of a few days or a week or two is of little consequence. But when traveling, avoid excessive delays whenever possible. When such delay is unavoidable, underexpose your Kodacolor shots slightly. The latent image seems to build up, as time goes on, until the film is processed, and slight underexposure offsets this intensifying or darkening of the pictures.

The Filmo 70 or 70-D Camera is especially suited for Kodacolor work, as its 216° shutter admits about 20% more light than most camera shutters. In view of the especial need of light in taking Kodacolor pictures, this advantage is important.

The next issue of Filmo Topics will bring you more information about taking Kodacolor pictures, and about projecting them. In the meantime, we hope that you will experience for yourself the interest that color can add to your films and the ease with which strikingly beautiful full color movies can be made by the Kodacolor process.

Missing Equipment

Filmo 70 Cameras

No. 8151. Consolidated Gas Co., New York City.

No. 9715. Notify Bell & Howell Co.

No. 11313. Martin G. Knorr, 1116 Wykoff Ave., Brooklyn, N. Y.

No. 19107. S. S. Laird, 19 Bonlevard, New Rochelle, N. Y.

No. 21136, 70-C. Notify Bell & Howell Co. No. 54901. Raymond C. Lake, 218 Main St.

No. 54901. Raymond C. Lake, 218 Main St., Brockton, Mass.

No. 57222, 70-D. Ralph Soby, West Hartford, Conn.

No. 145389, with waist-level viewfinder. Schwabacher-Frey Co., San Francisco.

Eyemo Camera

No. 142263, 71-C, with Cooke lenses; 35 mm.
 F 2 No. 132104, 47 mm.
 F 2 No. 159361,
 334 in.
 F 3.3 No. 135144. Paramount Publix Corp., 5451 Marathon St., Hollywood, Calif.

Filmo Projectors

No. 10870. Martin G. Knorr, 1116 Wykoff Ave., Brooklyn, N. Y.

No. 19279. S. S. Laird, 19 Boulevard, New Rochelle, N. Y.

No. 148158. Notify Bell & Howell Co.

Filmo Library Offers 62 Educational Films

THE Bell & Howell Company, FILMO Library division, has just released a group of educational films, sixty-two 400foot silent subjects in all, covering a variety of useful material. The majority of the films are on geographical subjects, dealing not only with the physical aspects of the various lands, but also with the people and their customs and occupations.

In the geographical group, the following countries are represented:

Egypt Morocco India Tunis Japan Korea Palestine Java Australia Austria Wales England Scotland France Italy Spain Sicily Germany Canada Guatemala United States-State, Regional, and City films Jamaica Cuba Brazil Porto Rico Smyrna

Eleven films deal with biology and nature study, including such subjects as: Monstrosities of Pondland, The Silk Moth, Swat That Fly, Adaptation of Insects, Inhabitants of a Hedgerow, Ant and Fly Studies, Wild Babies, Bare Facts Concerning Bears, Was Darwin Right, and Birds of Crags and Marshes.

Two films, Nature and the Poet, and An Indian Legend, are classed as literary material. Then there are three films in a group known as "Modern Truths From Old Fables." The titles are: The Hare and the Tortoise, The Evil of Gossip, The Man and the Flea.

A complete list of these sixty-two educational films may be had upon request. The price is \$30 per reel.

New York-The Wonder City

"New York-The Wonder City" is the title of a 400-foot 16 mm. film portrayal of the city, now available through FILMO Library in either sound or silent version. Its scenes include the New York skyline, Broadway, New Street, Broad Street, many of the buildings of especial interest, the Bowery, Park Avenue, Central Park, the Medical Center, Columbia University, the subways, Broadway by night, steamships, and other things usually visited by tourists. Silent version, \$25. With sound, \$30.

Events Worth Filming

Golf

April

18-22 Annual Mid-April Tournament, Pine Needles Golf Club, Pinehurst, N. C. Old Dominion Championship, Cascades 25 Course, Hot Springs, Va.

Horse Racing

Anril

16-30 Havre de Grace, Maryland 16-May 11 Jamaica, N. Y. Palo Alto, California

May

2-14 Pimlico, Maryland 2-21 Aurora, Illinois

Kentucky Derby, Churchill Downs 12-June 9 Belmont Park, N. Y. 17-21 Hagerstown, Maryland

Hunt Race Meetings

April Middleburg Hunt, Middleburg, Va. 16

Grand National Point-to-Point, 23 Green Spring Valley, Md.

Maryland Hunt Cup, 30 Worthington Valley, Md.

May

Virginia Gold Cup, Warrenton, Va.

7 White Marsh Valley Hunt, Broad Axe, Pa.

Radnor Hunt, Berwyn, Pa. 14

18-21 Rose Tree Fox Hunting Club, Media, Pa.

Motor Boating

April17

Ocean Race, St. Petersburg, Fla., to Havana, Cuba

May

Outboards Marathon, Albany, N. Y. 14 June

Philadelphia Yacht Club, 4 Essington, Pa.

Polo

April

3-17 Sandhill Polo Club, Pinehurst, N. C.

9-23 Pacific Coast Junior and Novice Championships, San Mateo, Calif.

15 El Ranchita, Texas

May

28-June 6 Boise, Idaho

31-June 14 Maryland Polo Club

Rowing

April

30 Harvard vs. M.I.T., Cambridge, Mass. May

14 Harvard, Navy, Pennsylvania, M.I.T., and Princeton, at Annapolis, Md.

Harvard, Cornell, and Syracuse, 28 at Cambridge, Mass.

Questions and Answers

Conducted by R. FAWN MITCHELL

Kodacolor

Q. My Model J Kodacolor projection lens is equipped with a bushing adapter. Is this satisfactory, and will this particular lens be redesigned to fit the Model J Projector without using the adapter?

A. The adapter furnished is entirely satisfactory and no change is being contemplated in the Kodacolor projection lens to eliminate the

Q. Is there any particular way to set this adapter into the lens holder?

A. Yes, the slot in the adapter must be set away from the tension ball set in the holder. Q. In one of my Kodacolor scenes the sky has a greenish tint. What is the cause of this?

A. This effect can be caused by several things: under exposure, improper alignment of the projector lamp, or failure to have the Kodacolor filter aligned perfectly will give the effect you describe, and it could also be due to the film being a little shrunken.

Q. Do the optical units of my Kodacolor projection system require any special care?

A. The auxiliary condenser lens should be cleaned occasionally. The filter must be kept clean and away from excessive heat.

Enlarging

Q. In making enlargements with my 375-watt lamp, I sometimes blister the film and overexpose. How can this be remedied?

A. When using the 375-watt lamp for making enlargements, the rheostat must be turned down and the safety shutter must not be held up too long. In making the exposure, just lift the safety shutter for an instant - only long enough to pass light when the enlarger shutter is released. A special opal auxiliary condenser is now being made for use with the 375-watt lamp in making enlargements. This condenser absorbs the excess light generated by the 375-watt lamp and thereby avoids over-exposure.

Depth of Focus

Q. Do lenses of the same focal length, but of different speeds, have the same depth of

A. Theoretically lenses of the same focal length should have the same depth of field (that is, of acceptably sharp focus) when used at the same stops. The larger the stop the less the depth of focus. In reality, owing to variations in lens construction and to personal conceptions of what constitutes satisfactory definition, the respective depths of focus may vary.

Take guesswork out of Exposure

Use the B&H Photometer for assurance of PERFECT EXPOSURES



The B & H Photometer gives positive assurance of correctly exposed film. Under any condition of natural or artificial light, it solves every exposure problem accurately, instantaneously. And it is as simple to use as a flashlight. You sight through the eye-piece, seeing your subject while you take the reading on exactly the important portion. Model A, for Filmo Cameras, \$17.50 (\$20 with case). Model B, calibrated for still photography, at the same price.

Right-Scale			B,	for	still
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No jumpiness when a B&H... Tripod holds your Filmo steady



Blur and jumpiness are eliminated when your Filmo is mounted on a B & H All-Metal Tripod. For panoramas or for tilting the B & H Tripod makes the camera movement slow, steady, and smooth. Pam and tilt bearings are large and free-moving, and operate independently or together. Tubular steel legs have internal locks. Leg tips have rubber caps for use indoors or on hard surfaces. Safety chain prevents accidental upsetting. Tripod alone, \$36. Zipper type leather case, \$12.50.

B & H Lens Modifier



A distorting lens that pulls the whole world out of shape while you film it; great for grotesque dream or nightmare effects. Lens Modifier (fits regular 1" F 3.5 Filmo 70 Camera The B&H Focusing Alignment Gauge

This tripod accessory alternately brings the Filmo 70-DA viewfinder and critical focuser exactly into the lens photographic position. Of particular value to all who do critical close-up work. Precision of slide and track insures accurate alignment. For use on the B & H All-Metal Tripod or any other tripod with standard thread. Price, \$21.

B & H Filmo Duplicator



A fun-maker. Causes the image to be doubled on the film. A person filmed with Duplicator has a "twin" mimicking every move. Filmo Duplicator (fits standard F 3.5 Filmo 70 and 75 lens), \$4.50.

B & H Prismatic Eye

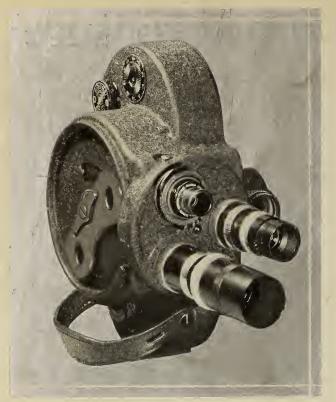


"Shoot around a corner" with the Prismatic Eye and take movies of per-

sons without their suspecting you. Enables you to take movies at right angles to your line of sight. Prismatic

BELL & HOWELL

Bell & Howell Co., 1842 Larchmont Ave., Chicago; New York, Hollywood, London (B&H Co., Ltd.) Est. 1907



THE FILMO 70-D—In beautiful Sesamee-locked Mayfair Case priced at \$245 and up. Other Filmos for as low as \$92.

THIS year is the 25th anniversary of the Bell & Howell Company. Among the many outstanding accomplishments of those years, there is none of which we are prouder than the Filmo 70-D Personal Movie Camera.

For this camera has made possible to amateurs virtually everything in movie-making that professionals do. And its fineness and range are combined with an amazing simplicity.

Seven accurate speeds from s-l-o-w to fast . . . 8, 12, 16, 24, 32, 48, and 64 frames a second. Three lens turret head to permit instantaneous change from one lens to another. Variable viewfinder to adjust the finder area to field areas of lenses of six different focal lengths. Critical focusing attachment if desired (in which case the designation is 70-DA). A general construction of watch-like precision wedded to a stamina which makes it possible to say: No Filmo has ever worn out.

Why shouldn't we be proud of the Filmo 70-D? Why shouldn't it win the place that it has won with experienced movie-makers . . . the Master of All Personal Movie Cameras.

MASTER

of all
PERSONAL MOVIE
CAMERAS

because 25 years went into building it

You'll want to know about this finest Personal Movie Camera. Ask your dealer to demonstrate it. Or write for the book, "What You See, You Get," to Bell & Howell Co., 1842 Larchmont Avenue, Chicago; New York, Hollywood, London (B&HCo., Ltd.) Est. 1907.



NEW FILMO PROJECTOR FOR ONLY \$150

Here's the answer to low first cost plus fine results and maximum durability in a movie projector . . . the new Filmo Model M. Single control—a child can operate it. Only simplicity, retention of basic Filmo 57 Projector design, and quantity production have made possible the low price. Mechanism and optical system essentially the same as those in other Filmo models of higher price. 300-watt lamp. Priced at only \$150. Other Filmo Projectors \$108 and up.

FILMO

PERSONAL MOVIE CAMERAS & PROJECTORS

Made by Bell & Howell, the world's leading manufacturers of finest quality professional and personal motion picture equipment.

PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL FILMO TOPICS



11 -7

JUNE-JULY 1932

Morgana Color Process for Filmo Cameras and Projectors

THE Morgana Color Process, invented by Lady Williams of Pontyclun, South Wales, is considered by far the best two-color additive process that has appeared in the past 25 years.

Since there is a demand for a color process affording great photographic latitude, large screen images, and duplicate prints, we have designed Filmo Cameras and Projectors with which Morgana color pictures may be effectively taken and shown.

The Morgana Process does not parallel the advantages of three-color systems, but has these major distinguishing features:

- 1 Regular panchromatic reversal film is used.
- 2 Duplicates may be made just as from reversal film exposed for black and white movies.

- 3 Any Filmo Camera lens may be used. The filters in the camera are behind the lens seat.
- 4 Pictures may be taken under adverse light conditions. Merely open the lens one stop to allow for the two-color filters.
- 5 Screen pictures 10 feet wide may be shown.

The disadvantages of the Morgana Process are less than those of any other two-color additive process. Color rendition, while not so faithful as by a three-color process, is nevertheless very pleasing and artistic. Slight fringing is prevalent with close-ups in fast motion, but is not considered objectionable.

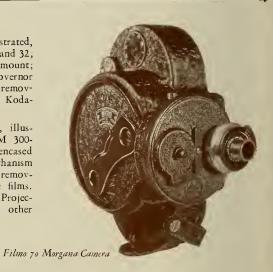
Correspondence is invited. Details on your color film work will aid us in advising you. Bell & Howell Co., 1842 Larchmont Ave., Chicago; New York; Hollywood; London (B & H Co., Ltd.). Established 1907.



The Filmo 70 Morgana Camera, illustrated, has five film speeds—8, 12, 16, 24, and 32, Cooke 1-inch F 3.5 lens in focusing mount; single-lens head; and 70-D type governor and spring. Morgana filter instantly removable for taking black and white or Kodacolor pictures. Price, \$190.

The Filmo 57 Morgana Projector, illustrated, is basically the Filmo 57-M 300-watt, 110-volt Projector plus the encased Morganacolor wheel and internal mechanism changes. Color wheel is instantly removable for showing black and white films. Price, \$210. Other Filmo Morgana Projectors with variable resistance and other lamps at prices ranging upward.

Filmo 57 Morgana Projector



BELL & HOWELL · FILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

Made by the world's leading manufacturers of first quality professional and personal motion picture equipment

PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL

FILMO TOPICS

Published monthly in the interests of personal motion picture makers by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

JUNE-JULY, 1932
VOLUME 8 NUMBERS 6 and 7

BETTER VACATION MOVIES

The second of a series counseling new (and old) Filmo owners in the use of their equipment

NOW that vacation time is almost here, perhaps you will welcome some suggestions for getting the best possible vacation films. There are all sorts of vacation films, you know-good, bad, and indifferent. With your FILMO and a little thought you can easily produce the good kind, even if your experience is limited. By "good" we mean not only sharp, clear photography and steady pictures, but also interesting subject matter arranged so that it really tells the story of your vacation—a film which later will not only vividly revive pleasant memories in the minds of yourself and your family or party, but provide fine entertainment for friends as well.

Taking random snapshots is not likely to produce the most interesting vacation film. A rough, general plan of some kind is really a requisite to success. By this we do not mean that it is possible or even advisable to prepare a complete scenario in advance. That would force you to pass up many desirable but unexpected picture opportunities. But you should have in mind or on paper a skeleton outline of the form your vacation record is to take - a framework upon which practically any interesting vacation episode can be hung. Many things you see and do will then suggest their logical place in your general plan, and



H. ARMSTRONG ROBERTS

With your Filmo and a little thought you can easily produce excellent vacation movies

you will proceed to film them in such a way that they fit into the plan nicely.

If your vacation will be spent in touring, a chronological record of the trip will probably be the most satisfactory. This does not require a great deal of advance planning. Merely ask yourself, before you shoot, "Is this something that we will want to remember?" If the answer is yes, take the best possible scenes of it. Will have more to say later about how to do this,

But if you will spend your time at one camp, resort, dude ranch, or seaside hotel, you may find it wise to use the "typical day" plan. Under this plan, scenes are taken at the resort on various days with the idea of assembling them later into a representative activity record.

Here is an example. The vacation was spent at a western dude ranch. It was planned in advance to take movie scenes there which could be arranged into an account of a typical day at the ranch. Scenes were shot on various days of the ten or twelve spent at the ranch-just whenever the opportunity presented itself to take something interesting that fitted into the plan. In many cases, the plan suggested the worthiness of scenes which otherwise would have passed unnoticed and unfilmed. See how these shots, which were apparently a hopeless jumble as they came from the camera. could be fitted together into a logical continuity because they were all taken for a definite purpose.

Cowboy driving horses into corral.

Horses milling around in corral.

Roping one of these horses.

Replacing a shoe on the horse.

Saddling the horse.

Movie maker mounting and riding off. Joins others. They ride away.

(Continued on page eleven)

SO YOU'RE GOING TO TAKE MOVIES ABROAD

CLARA E. LAUGHLIN

Author of "So You're Going to Paris", etc.

TRAVELING, half of every year, with a movie camera, and talking, all the time, with people who are going to travel and most of whom are going to take movie cameras, has given me a double incentive to learn where, and when, the most interesting movie possibilities are to be found.

Only a few people plan their trips primarily to get exceptionally interesting movies. But a great many people find it possible (with help) to arrange their schedule so that instead of "just missing" thrilling picture opportunities, they get to many places at just the right time.

Let me give you a few instances of what I mean:

In Great Britain, this summer, every movie enthusiast who is there on June 1 will try for typical and for unusual "bits" at the Derby. June 3, he will have some vantage point, for which he has manoeuvred, at the Trooping of the Colour on Whitehall Parade in honor of King George's birthday. The next day he'll be out at Eton, for "Speech Day". June 15 he'll be at Runnymede for the picturesque ceremonies of Magna Carta Day. And dawn of June 24 may see him at Stonehenge on Salisbury Plain, to see the repetition of the ancient Druid ceremony hailing the sun on mid-summer morning. If he can, he'll be at Tara for the Tailteann Games at the end of June. And he'll hurry back to Battle Abbey for the re-enactment of the Battle of Hastings, with 7000 participants, which takes place July 2-16-probably stopping, on his way from Ireland, at the Isle of Man for the ancient Tynwald ceremony. On July 12 he's bound to be in London for the Vintners' Procession in Upper Thames Street, and see the Wine Porters sweep the roads before the Masters and Wardens of the Company, as they have done since 1205. A week later he's on the Thames to film the ceremony of marking the swans, by the Vintuers' and Dyers' Companies. If he's in the Lake District on July 30, he'll be at Ambleside, to get pictures of the Rush Bearing,



PUBLISHERS' PHOTO SERVICE

A fine old Tyrolian character at Innsbruck. Austria, says the author, has a fine calendar for the movie maker

commemorating days when all floors were strewn with rushes. Whereas, if he's in Ireland, he'll be at Croagh Patrick in County Mayo to see thousands of Pilgrims crawl on hands and knees to the mountain top from which St. Patrick prayed and banished all snakes.

There are some who wouldn't miss getting pictures of a Sheep-Dog Trial. Many, this summer especially, will be bound for the gatherings of the clans which will have unusual features to commemorate the 100th anniversary of Sir Walter Scott's death.

In Florence, June 24, the movie cameras that "whir" in the grand old Piazza della



Signoria, in front of the Palazzo Vecchio and the Loggia dei Lanzi, will record a football game with players in 16th century costume, and many of the spectators representing the nobles and the famous Corporations of Renaissance Florence. July 2 they'll be at Siena for the incredibly picturesque Palio, the Mediaeval horse race, when the clock turns back five centuries in grand old Siena. The next day, at Venice, is the procession of the Redentore, from St. Mark's over a specially constructed bridge across the Grand Canal to the Church of the Redentore on the Giudecca. There's a "Pardon of Assisi", August 1 and 2. A gorgeous costume display at Dobbiaco in the Dolomites on August 15. A colorful grape festival at Luino in the Italian Lakes on August 27. And many, many more things that movies should be made of.

Austria has a fine calendar for the moviemaker. The Summer Solstice celebrations in the Tyrol and in the Wachau (the Danube, west of Vienna) bring out splendid costumes and most interesting pageantry.

The great time in Hungary is the fortnight in mid-August of which St. Stephen's Day is the center, when all the gorgeous costumes of Magyar nobles, peasants, gypsies, clergy, pour out in bewildering splendor, and every dance, play, pageant is in full swing. Any Sunday at Mezokovesd will be wonderful, in the matter of unbelievably quaint costumes.

Prague will be a paradise for the "Filmos" in early July when the Sokols, the gymnastic Olympiad of the Czechs, are in progress, to the accompaniment of all the opulent old costuming of the

country and the patriotic revival of many quaint old customs. If you can't manage this date (which is worth making a big effort for) try any Sunday in the neighborhood of Brno, 78 miles north of Vienna, near the southern border of Czecho-Slovakia.

June 6 is Swedish Flag Day, picturesquely observed at lovely Stockholm. The Midsummer Festival, June 23-24, is celebrated all over Sweden with traditional rites which in themselves would richly reward the traveler though he saw nothing else of Sweden's lavish beauty and absorbing interest. At the beginning of July there will be beautiful fetes in Dalecarlia, which I always think of as "the heart of Sweden", and try never to let any visitors to Sweden miss. The costumes there are superb (even on Sundays one gets a fine showing there) and it is the countryside of Zorn.

In Spain you'll find a fair and pageant of great "possibilities" from June 12-14 at Medina del Campo, in whose great castle Isabella of Castile died and Cesare Borgia was imprisoned. There's a typical Spanish fete at Segovia, June 24-29. And much to delight the movie-maker at Pamplona's Fete of San Fermin July 5-16. (Pamplona was built by Pompey's sons, and it may have been citizens of Pamplona who were responsible for the annihilation of Charlemagne's rear guard at Roncesvalles.) Valencia has a fair commencing with a battle of flowers, on July 24; and a month later you may film, there, the Christians defeating the Moors all over again. Bull-fights make wonderful movies. And pelota games are swift

enough for almost any speed-lover. If you can get to Astorga, 28 miles from Leon, where headquarters of the Maragatos are, on Corpus Christi, to see these curious people dance the Canizo in the arcaded Plaza Mayo, you'll have a film to be proud of. That whole northwest corner of Spain is a succession of charming pictures. The superb gardens at La Granja (near Segovia) are the scene of fetes August 24-27.

In Holland you should be in Middleburgh on Thursday morning for the Butter Market, in Alkmaar on Friday morning for the Cheese Market, at Staphorst on Sunday to see the delightful Friesland costumes and make-a trip out from Giethorn in the section where the only communication is by small boats.

If you are in Belgium the last Sunday in July, look out for the Procession de la Penitence which has been celebrated since 1100 at Furnes, 15 miles from Dunkirk.

France has so much for the movie-maker that I don't know where to begin. Of the Brittany Pardons, there's Plougastel, the first Sunday in July, Locronan the second Sunday, and Pont l'Abbe the third. Ste. Anne d'Auray comes July 25-26—

Quimper August 15-17. Carcassonne around July 14 is a great place to be with a movie camera. Market-day at Saint-Jean Pied du Port in the Pyrenees is full of "pictures". You might strike a Pastorale, a survival of

the Moralities or Mysteries of the Middle Ages, around Mauleon, in the Basque Country, or a wedding in the Valley of Ossau, east of Oloron-also Basque. Mirepoix, on the route from Pau to Carcassonne, is so marvelous a "setting" that even ordinary folk walking through ittimber-arcaded Square make a thrilling picture. The same is true of dozens of towns, like Cordes (near Albi) and Martigues "the Venice of Provence" (near Arles) and Roquebrune (above Monte Carlo) and Eze (on the Middle Corniche). Anyone who gets to Le-Saintes-Maries for May 24-25, any year, when the gypsies come from all over Europe to elect a queen and hold jousts, bullfights, and horse races in her honor, will have a film anyone in the world may envy him. July 14 is a great time to be in Strasbourg or, even better, in such small picture-towns of Alsace as Obernai.

Don't forget that the Camarque, the great delta of the Rhone, is full of "cowboys" (gardiens) who ride horses "descended" from the Arab steeds brought there by Saracens in the 8th century. There the rodeo flourishes, picturesquely.

The Grandes Fetes d'Arles, at the end of June and beginning of July, should be (Continued on page nine)



With proper ceremony and costumes, Czecho-Slovakian men advance on the harvest fields

"In Holland you should be . . . in Alkmaar on Friday morning for the Cheese Market . . ." An average of one hundred thousand of these cheeses are weighed and shipped here every week

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A SEVEN YEARS' DREAM-

—has culminated in the introduction of the Morgana
 Color Process for Filmo Cameras and Projectors

LADY JULIET WILLIAMS

Editor's Note: Lady Williams, Pontyclun, South Wales, is the inventor of the Morgana Color Process, which is announced on the inside front cover of this issue. In this article she recounts the history of the development of the process.

N 1924 I spent three months in Hollywood with my mother, Mrs. Elinor Glyn, who was at that time producing her film, "His Hour", at the Metro-Goldwyn Studios.

Many of the characters were in Cossack and other bright uniforms, and looked wonderfully attractive under the arc lamps on the set. I shall never forget the sense of bitter disappointment which I felt when I saw the rushes. The black and white shadows on the screen seemed to me to have lost all the beauty and vitality of the gay scene I remembered.

I decided then that film art, however cleverly developed to bring out the values of light and shade, could never be complete until color was added. It was my dream to see this come true. Afterward I saw many professional color films, but was always disappointed by their darkness and lack of true color and definition. I began to read the technical papers about color photography, as I felt certain that something better could be found. There were many suggestions in the technical books for producing color by the additive method, which I longed to try.

A few simple experiments showed the immensely extended range of color that could be given by projecting black and white film through colored gelatine filters, instead of dyeing it, and I felt certain that the eventual solution of color cinematography would be along these lines. I persuaded my husband to buy a 35 mm. camera and have it fitted up with a mechanism that would bring orange and green filters alternately before the lens as each frame was photographed. I found that wonderful colors could be produced in this way, although there was always flicker owing to the insufficiently rapid alternation of the colors on projection.



Lady Williams

My mother was about to make a picture at the Elstree Studios, starring Elissa Landi (her first Talkie—this was early in 1930), and she very kindly allowed me to shoot the film with my color camera alongside the main camera. Everyone in the Studio but my mother thought me insane, especially our cameraman. I was told a hundred times that this was an old system—Kinemacolor it used to be called—that could never succeed at "talkie" speed, since it was impossible to overcome the "flicker".

I kept on, however, and persistence was rewarded, though not quite as I hoped. The film I made was useless, even afterward when the solution of the flicker problem was found, because in my ignorance I had not corrected the taking filters for mazda lighting, and the colors were all tinged with orange! But owing to the mysterious disappearance of the camera attachment just as we were about to shoot, I had to get it renewed in a hurry, and Providence sent me to Mr. S. G. Short, whose mechanical knowledge and genius I invoked to help to solve the flicker prob-

lem. For months after this we worked together, experimenting with half a dozen devices. I think we tried almost every possible mechanical attachment and filter combination.

By this time we had transferred our efforts to the 16 mm. camera, as the 35 mm. was really too expensive for prolonged experiments. I took literally hundreds of rolls of film, gradually achieving better and better results as regards color by improved filters in taking and projecting, and as regards flicker by various methods of filtering the light on projection. The colors were lovely, but the flicker was still visible, in spite of all our efforts. It was obvious that the only true solution of the problem lay in the direction of increasing the speed of alternation of the colors. The puzzle was how to achieve this without unduly lengthening and straining the film and mechanism.

At last Mr. Short said that he thought it might be worth while to try the experiment of moving the film backward as well as forward, to increase the rate of alternation. This seemed to everyone a crazy idea, and as it involved a good deal of expense merely to test it we were urged to give up our experiments, which had already taken so much time and money. It really seemed scarcely justifiable to continue, and I think it was wonderfully kind of my husband to go on backing me at this stage, when he had really lost hope. My principal contribution to the invention was just this effort of faith during the long, tedious months of 1931, when Mr. Short was actually making, with infinite labor and difficulty, the first "Morgana" machine. I knew that it would work, though I believe there were moments when he scarcely thought so himself.

At last the long effort was completed, and we ran the first really successful roll of film. It was a great moment.

Then followed weeks of suspense while patents were searched to discover if the idea were really novel. It was! Mr. Lamb, (Continued on page nine)

GETTING THE CROWD TO MAKE A MOVIE

How a group of summer resort guests produced a photoplay

HARVEY F. MORRIS

WE WERE staying at a summer resort that seemed to have everything—swimming, sailing, golf, tennis, bridge, and dancing. But after a time, even these things became an old story. Matters came to a climax when we had two days of steady rain. Even the most conscientious had caught up in their letter writing and were just sitting around waiting for something to turn up. Then along came Karl with his idea.

"Let's make a movie—a play that will give the whole crowd something to do, and give us something to remember cach other by when our vacations are over," he said.

At first, the response was mild, if not skeptical. "What kind of a movie? Where will you get your plot? Where will you get your costumes? Did you ever make one, before?" Questions came from all corners of the room, but Karl was prepared. "I was never in one," he declared, "and if none of us ever was that will make it all the more fun. There are three or four moving picture cameras in the crowd, . . ."

"Yes, but the plot . . ." "And the costumes . . ." "And the acting . . ." They were all at him at once. When they calmed down, Karl continued, "Of course, we'll have to choose a plot that fits what we have to work with. With all the old colonial furniture there is around here, and old houses and paths in the woods . . ." He paused a moment. "Let's do a picture of Myles Standish!" he exclaimed.

"And John Alden, of course," said Nan. "And Priscilla," from Burt. "The costumes will be easy," said Sue.

Well, you never saw such a change come over a group of people. We got paper and pencils and gathered around the big table. Everybody wanted to talk at once. It was pretty thick for awhile, but soon we began to get our thoughts organized. Karl was to be director and work out the general idea. Burt was to be assistant director and camera man. Sue was elected to see about costumes. Jack, who liked to putter around, was assigned to make



Myles peers in through the window—sees scolding wife, squalling haby, humble husband—and his face breaks into a broad grin

Two years later, Priscilla
... trying to cook dinner and at the same
time look after a
crying baby

the titles and do the editing.

Then out into the rain we went—Sue to the library to get pictures of colonial costumes and then to the "general store" to buy yards of the cheapest calico. Nan hurried off to tell old Mrs. Tator that we wanted to take some scenes in the rooms of her hundred year old cottage. Burt went to see the minister about getting into the little village church, and Jack—well Jack just disappeared.

That evening we were too busy discussing locations, backgrounds, action, close-ups, etc., to play bridge. Next morning the sun shone brightly and Burt wanted to start shooting, but Karl said, "No, it will be a lot better in the end to spend today getting everything planned and ready. I want to rehearse Myles and John and Priscilla. And I should think you would want to go to each different location and try out your camera angles."

"That isn't a bad idea," said Burt.

"And besides," Karl added, "the costumes aren't ready, yet."

So we spent another day in preparing. The whole summer colony began to real-

ize that something was stirring. Sue has a winning way, and everybody who could use a needle pitched in and helped. That night, all the costumes were finished. The properties to be used were limited to two guns and a baby. The guns were loaned, and the baby would be, when needed.

So the morning of the third day we started to shoot. Karl, in his orderly way, had notes written out covering all the action. This proved to be an immense help. For one thing, it enabled us to do the different scenes in their regular order. I think it helped the actors too, and they were able to carry the spirit of the action along better than if we had taken the last part first. And, of course, it saved Jack a lot of work in splicing.

First, we showed Myles sitting in church, his attention focused on Priscilla, rather than on the preacher. Then the same for John. Then the congregation leaving the church, that is, as much congregation as we had costumes for. Last of all, John and Myles in close, friendly conversation.

Then Myles and John sitting on a log, and Myles asking John to propose to Priscilla for him, John's dismay and re-(Continued on page nine)

FILMO NEWS PICTOR



Ta

(Right) Many Filmos record visits to Yosemite each year. Six Filmo Projectors entertain guests in the evening and give them samples of interesting trips they may take within the park. The Yosemite Parkand Curry Company's 16 mm. film library is constantly growing, as two executives use Filmo 75's



Ernie Poole of the Canadian National Rai landed a fine 26-pound salmon trout at L Ontario, and George Giles, Canadian Govern Bureau, is taking an Eyemo close-up

L . . .



Ellen Steel, Germantown, recording the g speed boat races of the Philadelphia Club with her Filmo 70-D. Miss Steel, who nong the first devotees of personal movies, asiders her 70-D the best camera she has ever operated



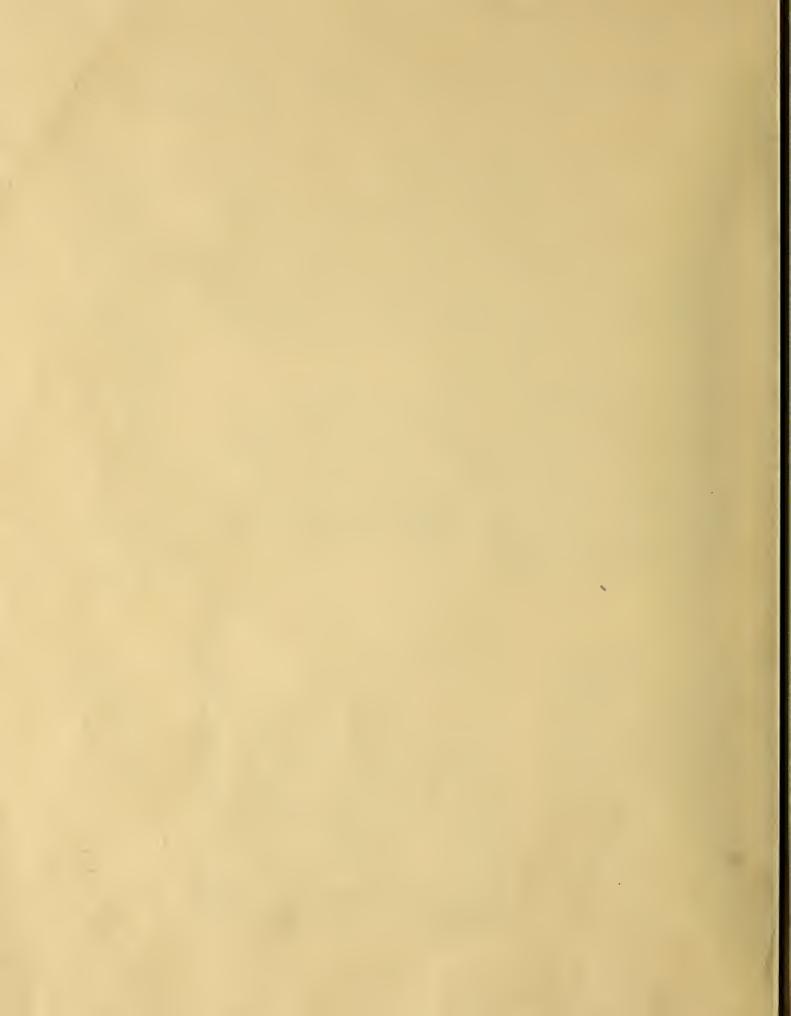
COSMO

Tip for Jane brides—take a Filmo along on your honeymoon, That was the advice of Mr. and Mrs. Joseph A. Eisenberg, Brooklyn, N.Y., asthey returned from a threemonth honeymoon in Europe. 2200 fret of Filmo unwies will refresh memories of the trip for them whenever they wish

(Left) A location scene during the production of "Pledge's Plight", two-reel film by the University of Sonthern California Cinema League. The principals are Corrine Currey and William Cover. Director (holding script). Bryant Hale. Cameraman, Reeves Templeton, Camera, Filmo 70-D

DFREY, JR.

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FILMO NEWS PICTORIAL ...



H. ARMSTRON

A most unusual photograph is this one showing both the Filmo cameranum and the wild deer which was his subject, Taken in the Canadian Rockies



Ernic Poole of the Canadian National Railway all lias just landed a fine 26-pound salmon tront at lake Ontario, and George Giles, Canadian Government time Picture Bureau, is taking an Eyemo close-up of Porize



Miss Ellen Steel, Germantawn, recording the opening speed boat races of the Philadelphin Yacht Club with her Filmo 70-D. Miss Steel, who was among the first devotees of personal movies, considers her 70-D the best camera she has ever operated



Tip for June brides—take a Filma along an your baceyaman. That was the advice of Mr. and Mrs. Joseph A. Elseaberg, Brandlyn, N.Y., astheyreturnedframathreemouth honeyaman in Europe, 2200 feet of Filmo gavies will refresh memories of the trip for them whenever they wish

(Left) A location scene during the production of "Pledge's Plight", two-reef film by the University of Southern Callfornia Cinema League. The principals are Carrine Carreyand William Gover, Director (holding script), Bryant Inde. Cameraman, Revex Templeton. Camera, Filma 70-D





Producing surgical films at the Wesley Memorial Hospital, Chicago, with a Filmo 70-DA Camera

(Below) Charles E. Keevil of The Chieago Rapid Transit Company working on the film, "Keeping the Cars Rolling"





MOVIES IN INDUSTRY. EDUCATION. MEDICINE.

Chicago Rapid Transit Company produces car maintenance film

KEEPING the Cars Rolling" is the title of a 16 mm. film recently produced for the Chicago Rapid Transit Company by Charles E. Keevil and Lester H. Reichard, using a Filmo Camera. The original purpose of the picture was one of employee education, but while preparing the scenario it was seen that the subject could be so treated that the film would be interesting to the general public and thus be useful in public relations work. So the film was planned and produced to perform both functions, which it has done with marked success. The technical problems of illumination in the dark pits under the cars and elsewhere in the shops, where only 600-volt current was available, were ingeniously overcome. FILMO'S compactness and convenience was especially appreciated in the close quarters encountered in taking many of the shop scenes. The finished film of 650 feet gives a clear and interesting account of the inspection, painting, and overhauling of elevated cars as practiced by this company. It is being shown to schools, clubs, and other organizations in Chicago, and can be secured for similar showings on application to the transit company.



Dr. Herman N. Bundesen, at the Filmo Projector. Left, Dr. L. W. Morrey. Right, Dr. A. J. Carlson of the University of Chicago

Surgical films

THE close interrelationship between medical, school, and industrial uses of the 16 mm. motion picture is illustrated in the case of some surgical films taken recently in the Wesley Memorial Hospital, Chicago. These pictures are made available by the Meade-Johnson Co.,

Evansville, Ind., to medical schools and societies to show approved surgical and general hospital technique, and incidentally also the results obtained from proper use of the company's products. The photograph above shows the filming of a tonsilectomy with Filmo 70-DA Camera using the 1-, 2-, and 4-inch lens combination recommended for surgical work. Tripod and focusing alignment gauge, plus improvised lighting units and photo-flood bulbs, complete the set-up.

Dental health education

A similar connection between school and health authorities is typified by the picture of Dr. Herman N. Bundesen, president of the Chicago Board of Health, showing a 16 mm. dental health education film before a meeting of about thirtyfive of his bureau chiefs. The picture, "Grandfather Molar," shows how any school can put on a dental health play as a school project. The play itself was written by Dr. L. W. Morrey, head of the Board's Dental Service. The film was made at the Eugene Field School, Chicago, with a group of 6th grade children actually arranging and staging the play. Beginning with the presentation of a health lesson, with a FILMO Projector showing pictures obtained from the Bureau of Visual Instruction, Board of Education, the film carries the whole story through every step of preparation, and includes the performance of the play. The cost of the film was borne by the Public Relations Committee of the Chicago Dental Society, to whom applications for copies of the play, and for the use of the film, may be addressed.

So You're Going to Take Movies Abroad

(Continued from page three)

triple-starred by the movie-maker, they are worth a great effort to get to.

Germany, always a paradise for the camera, this summer offers an exceptionally alluring lot of spectacles for the movie. The first fortnight of June there's a Rhine festival at Wieshaden. July brings festival plays in the fortress at Coburg of which Luther wrote: "A mighty fortress"; the annual repetitions of the Kinderzeche at Dinkelsbuhl! The Thirty Years War play at Nördlingen, when the old walled town turns the clock back three centuries. And the Living Chess pageant at Schreiberhau in the "Giant Mountains" of Southern Silesia, near the Czech border, northeast of Prague, Stuttgart has a costume parade on July 30 which ought to be rich in Black Forest types. And there's one on July 31 in the Spreewald, that exceedingly picturesque district between Berlin and Dresden, where the Wendish people have preserved so many of their peculiar ways, and the country is a network of waterways. Nuremberg has festival performances, August 25-27, in connection with the 300th anniversary of Gustavus Adolphus' death. And there'll be the always-lovely plays at Weissenburg, near Nuremberg. Anything that happens in a town like Hildesheim is bound to make an enchanting picture.

I've not mentioned a tenth of the opportunities. But this sort of thing gives the amateur his great chance of "shooting" a gorgeous production at small cost, and adding something of wide interest and definite value to the library of worth-while travel films for which there is a rapidly-increasing audience as projectors come to be a part of the essential equipment in homes, schools, clubs, hospitals, and many other places.

A Seven Years' Dream

(Continued from page four)

the London representative of the Bell & Howell Company, was the first to see a show on the new machine, and his immediate appreciation of the advantages of a large, brilliant, flickerless color picture led us to take, in the Autumn of 1931, seven years after my first visit to Hollywood, the trip to Chicago which ended in the handing over the 16 mm. side of the process to further development in the capable hands of Bell & Howell.

Information about the Morgana Color Process as applied to Filmo Cameras and Projectors is given on the inside front cover of this issue. Additional facts may be had upon request. Investigate the advantages of this new color process for summer vacation movie making.

Getting the Crowd to Make a Movie

(Continued from page five)

luctant consent. John's famous interview with Priscilla, his report to Myles, and their quarrel.

Finally, two years later, Priscilla—not so neat or demnre—trying to cook dinner in the fireplace and at the same time look after a squalling infant. John comes in. She scolds him for being late. Thrusts the baby into his arms. Myles' face at the window. He takes in scolding wife, crying baby, humble husband, and his face breaks into a broad grin.

Of course there was a little more to it than that, but any crowd making such a picture would want to work out their own scenario, anyway—adapting it to their own actors, properties, and locations available. You might prefer to film Pocahontas and John Smith or the landing of the Pilgrims. And make it funny!

As you can imagine, we could hardly wait to see our picture on the screen. When the processed film did arrive, Jack captured it, hore it off to his room and locked the door. That evening, when we all had the thrill of seeing it for the first time on the screen, we understood why.

He had done a splendid job of editing, cutting out all the poorly lighted, poorly acted, or uninteresting bits, and building it into a smoothly running, constantly interesting story. And he did more than that.

The picture, as thrown on the screen, instead of jumping right into the action, started with a beautiful title—a picture of a colonial fire-place on which Jack had lettered his inspiration for the title—"Myles Smiles." At the proper point in the action, a subtitle car-

ried the famous question, "Why don't you speuk for yourself, John?" lettered on a photograph of a charming colonial interior, For a subtitle preceding the "two years later" scenes, he had taken the figures of Father Time and the infant New Year from a New Year greeting card and used them as decoration with the words "Time heals all wounds."

It was Jack, too, who made neatly lettered cards carrying the names "Myles Standish" and "John Alden," and put them on the ends of church pews, which by means of close-ups clearly introduced the two main characters early in the picture.

If we had put on a play, it would have been all over with the one performance, but now we can see this picture whenever we wish as a reminder of the fine vacation we had and of the fine friends we made. And of course we learned how to do it still better next time.

It's a good rule to start with the general view, then closer, then the close-ups. Also keep the audience in suspense for a moment as to who the character is or what he is doing. This sometimes requires a close-up first. For example, we showed a close-up of Priscilla's back, then a shot from a few feet farther away showed her running out of the picture, then hurrying back, then rushing away again,—all before we showed the baby. That proved quite effective.

Also take plenty! It's easy to cut out a couple of feet of film in editing, when it's impossible to add an inch. And don't let the action flash to completion too quickly. Remember that it has to be clear to persons seeing it for the first time.

For real fun, for getting people acquainted quickly, for making a fine souvenir of your vacation, get the crowd to make a photoplay!



Because of its great photographic latitude, the Morgana Color Process is fine for color movies of your vacation

Novak, seen in Filmo Library Golf Lesson films, rated one of world's best golf teachers



. SCOTT CHISHOLD

Bobby Jones using his Filmo. He advocates movies for golf teaching

JOE NOVAK, who demonstrates his 1-2-3 method of learning golf in the Filmo Library Novak Golf Lesson Films, was rated as one of the eight leading golf instructors of all time, by Chester Horton, Chicago pro, in an article in the Los Angeles Times. Novak is pro at the Bel-Air Country Club near Los Angeles.

To quote from the article, "There are two distinct types of professional golfers, those who get their thrills out of playing the game, and because they are in the public eye receive most of the plaudits, and those who get their pleasure out of instructing others. Chester Horton . . . considers the art of teaching golf as important as the ability to play the game, and has picked a list of eight leading instructors of all time."

Previous to this recognition as a great teacher, Novak "won a reputation in tournament play," the article states, "finishing in a tie for second place in the California open championship of 1923. He was California State P. G. A. champion in 1925."

The Joe Novak 1-2-3 Golf Lesson Films were produced by Bell & Howell several years ago, being directed by Novak, who also appears exclusively in the pictures. They teach graphically by the same successful method that Novak employs with his individual pupils. The stroke is broken down into its fundamentals, and then each of these fundamentals is further broken down, with the result that correct form is grasped with great ease.

There are four 100-foot films in the series: Analysis of the Golf Swing; Illustrating the Detail; Teaching the Use and Reason for Various Clubs; Explaining the Controlling Element of Good Golf Play. These are \$6 each. All four on one 400-foot reel in humidor can, \$25.

An advanced amateur tests the Photometer

W. E. KIDDER, that indefatigable traveler and personal movie maker of Kalamazoo, Michigan, visited us not long ago and showed us some of the films which he had taken of the Mayan ruins at Chichen Itza, Yucatan. The pictures were most interesting in their subject matter, and were also interesting and convincing as a demonstration of the necessity for and success of the B & H Photometer in determining the correct exposure, especially under unfamiliar conditions such as travelers so often encounter.

In a number of instances, Mr. Kidder had filmed the same scene with two or more different exposures — one as dictated by his Photometer, another according to his judgment, and sometimes still another according to the judgment of some other photographer. Invariably the Photometer reading gave a correct exposure, while shots made with the other exposures were usually badly over-exposed.

"The light at this place," Mr. Kidder said, "was extremely tricky. In the early

morning, under bright sun, my judgment would call for stop F 11 or F 16, with the supersensitive panchromatic film that I was using. The meter would show F 4.5, and results showed that it was right. About an hour later the meter would call for F 22 or F 32, and by following the meter I got correctly exposed scenes then, too. Then a little haze would appear in the sky, and the Photometer would give readings as low as F 8

to F 11, depending upon subject. With such radical changes occurring within a 15-minute period, and being so deceptive to the eye, I would have lost many scenes and ruined much film had it not been for the accuracy of the Photometer. It paid for itself many times on this one trip. My judgment and experience were of absolutely no value in the majority of cases down in that jungle."

Light values can and do puzzle even such advanced amateurs as Mr. Kidder in far



W. E. Kidder

less remote places than Chichen Itza. Many of the countries more frequented by travelers than Yucatan present bewildering conditions with which only a dependable exposure meter can cope.

Nor do you have to leave your own home before you need a Photometer, Mr. Kidder has found. He had filmed a series of indoor scenes shortly before we saw him last, and had this

to say about the Photometer as applied to that common problem:

"Some scenes received a combination of daylight and artificial light; others, artificial light alone. Whenever the stop indicated by the Photometer was used, I got a perfect exposure. When occasionally I doubted the reading of the meter, I found that my judgment was in error. With the Photometer you can take the reading on the important part of the subject, and not the whole landscape."

Better Vacation Movies

(Continued from page one)

Party fords stream, ranch huildings in background.

Party riding over mountain trails.

Arrive at a lookout point, admire view.

Distant view of mountains.

Party starts return trip.

Party approaching ranch buildings at a walk.

Girl pulling bell rope.

Telephoto shot dinner bell ringing.

Mounted party breaks into a run, races for harn, dismounts, and continues race afoot to dining hall.

If no advance plan had been in the mind of the cameraman, no doubt some of the shots essential to the completeness of this sequence, of which we have listed only the essentials, would not have been taken.

So much for the plan, except that we should add this advice—film little sequences rather than single shots. The suggestions near the end of the previous article of this series cover this important point. Anything worth filming is worth a long shot and a close-up, at least.

Take plenty of close-ups—they help identify the people and things appearing in your films, and add desirable variety and interest.

Be sure to hold the camera rock-steady. Let the subject do the moving. Most scenes, even landscapes, are more pleasing if taken without moving the camera. Panoramas are seldom necessary, and are difficult to accomplish with sufficient smoothness and slowness to be pleasing when projected. Avoid them. Hold the camera still. When you must take a panorama scene, set the camera to operate at 24-or 32-speed, if it can be operated at these speeds. This will minimize the results of pamming too fast. Use the faster camera speeds also in taking scenes from a moving train or automobile,

Next to unsteadiness and excessive panoraming and tilting of the camera, the most common fault of personal movies is incorrect exposure. Over-exposure produces light, washed-out looking pictures on reversal film. Under-exposure results in "soot-and-whitewash" pictures-that is, extremely harsh, contrasty scenes without the desirable intermediate tones of grey. On ordinary ontdoor scenes under atmospheric conditions normal to the United States you can't go far wrong on exposures if you will follow carefully the exposure chart supplied with your Filmo. But no exposure chart can be more than a general guide for photography under average light and subject conditions. The only wholly safe and sure way to determine correct exposure is to use a dependable, accurate exposure meter, such as the B & H Photometer (see advertisement on inside back cover). Of all the accessories available for use with Filmo cameras, this is the first to add to your outfit. It is really a necessity unless you are satisfied with inferior pictures.

The angle from which the sunlight falls upon the subject has a great effect upon the heanty of your picture. And as this angle can usually be controlled by moving the subject or by selecting a better camera position, or both, it is profitable to consider the effects of different light angles. Full front light on the subject, with the sun behind the cameraman, gives a flat picture of almost any sort of subject, since there are no shadows to give the effect of depth. Side light is far more satisfactory. It gives roundness and depth to pictures of people, and a third dimension to almost any scene, due to the combination of high-lights and shadows which results. Unusual effects can he secured by shooting toward the light. With a short exposure this gives a silhouette; with a full exposure for the shadow side of the subject the result is the back-lighted effect so often seen on the professional screen.

In filming back-lighted scenes, it is important to see that the lens is so shaded that direct light rays do not strike the glass, or halation and flares will result.

Portraits (close-ups) are hetter when taken in a soft light, as under a hazy sun or in shade. Bright sunlight produces unnatural dark shadows on the face in the resulting picture.

It is desirable to seek the best camera position for a scene not only so that the light will fall upon the subject from a pleasing angle, but also for the improvement of composition. Often, in filming landscapes, a few steps to one side or the other, or hackward or forward, will permit you to take the scene through a frame of trees or to include interesting foreground details. In filming small children at play a vicwpoint lower than eye level is often desirable. By sitting or kneeling, you can make the youngsters a more dominant part of the picture than if you take them from a higher camera position.

Rapidly moving subjects moving fairly close to the camera should not be filmed from at right angles to their direction of movement, for to do so will make them jerk and flicker across your screen in blurred confusion. Film such subjects at an oblique angle.

Avoid having members of your party appearing inappropriately in your scenic shots. There are plenty of other opportunities to introduce them in a logical way so that it is not necessary to let them distract the attention of your future audiences by moving about in scenes in which the view is the thing of major interest.

And when your vacation is over and your 100-foot film rolls are back from the processing station, assemble them onto 400-foot reels and get them edited and titled before you show them beyond the family circle. For half of this matter of making better vacation films is their proper editing and titling. How to do these things will be the subject of another article of this series in an early issue.

Missing Equipment

Filmo 70 Cameras

No. B-1413. V. S. Smith, 5828 W. Lake St., Chicago.

No. 5525. Erker Bros. Optical Co., St. Louis. No. 14628. Queen Insurance Co., 150 Williams St., New York City.

No. 25187, 3 speed, with Meyer 1" F 1.5 lens No. 293844. Dr. J. A. Cutting, Agnew State Hospital, Agnew, Calif.

No. 27317. Williams, Brown & Earle, Philadelphia.

No. 35236. Richard Loewenstein, 39 S. La Salle St., Chicago.

No. 45651. J. A. Partington, 37 E. 64th St., New York City.

No. 45677. R. K. Laros, Bethlehem, Pa.

No. 49426. Geo. F. Shaw, 440 Fairmount Ave., Philadelphia.

No. 50908. R. L. Williams, 2374 Roxboro Road, Cleveland Heights, Ohio.

No. 54554. Chauncey Gold, 9 Holland Road, South Orange, N. J.

No. 144668 with Meyer 1" F 1.5 lens. J. C. Reiss. 10 Hill St., Newark, N. J.

No. 144802. Carl K. Frey, 247 Genesee St., Utica, N. Y.

Nos. 146008 and 147192. Notify Bell & Howell Co.

Filmo 75 Cameras

No. 46489. Army & Navy Cooperative Society, Ltd., Chowringhee, Calcutta, India. No. 46603. Miss Ruth Hixon, 1519 Hinman Ave., Evanston, Ill.

Filmo Projectors

No. 20899. H. V. Kepner, Principal. West High School, Denver.

No. 26108. General Electric Co., Los Angeles.No. 28543. Lyon & Healy Co., Jackson & Wabash, Chicago.

No. 54172. J. M. Gibbon, Canadian Pacific Ry., Montreal, Canada.

No. 55907. Chauncey Gold, 9 Holland Road. South Orange, N. J.

No. 61407. Notify Bell & Howell Co.

No. 63470. Bureau of Special Investigation, 580 Market St., San Francisco.

No. 145267. Ralph Harris & Co., 30 Bromfield St., Boston.

No. 145315. Collins & Aikman, 25 Madison Ave., New York City.

No. 145795. Packard Electric Co., Warren, Ohio.

No. 146143. Hamburg-American Lines, 39 Broadway, New York City.

No. 147919. Walter R. Miller Co., Inc., Binghamton, N. Y.

No. 59337. Blackwell Film Producing Co., 1014 Jackson Ave., Toledo.

Eyemo Cameras

No. B-1574. Frederick A. Kuser, R.F.D. No. 5, Trenton, N. J.

No. 1534, with 4 Cooke lenses: 47 mm. F 2.5
 No. 135285, 33₁" F 3.3 No. 135155, 6" F 4.5
 No. 149094, 8¹/₂" F 5.6 No. 129400. \$100
 reward offered by C. P. Grant, 3744 Glenway Ave., Cincinnati.

Filmophone

No. 1205. Packard Electric Co., Warren, Ohio.

"Universal" Talkies Released

A FINE, varied list of 16 mm. sound films is released by FILMO Library this month. These talkies are available at \$30 per 400-foot reel, including sound disc.

FEATURES

LATURES		
	Reel	s Code
Fighting Legion	7	Madek
Trailing Trouble	6	MADEL
Mountain Justice	7	MADEM
Roaring Ranch	7	Madeo
Oswald Cartoons		
Africa	1	MADEP
Alaska	1	MADER
Mars	1	MADES
China	1	MADET
Specials		
Hotsy Totsy	1	MADEU
LEATHER PUSHERS		
All for a Lady	2	Madew
FEATURETTES		
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Before You Leave On Your Vacation

BEFORE you leave on your vacation—well before the last minute rush of preparation—take your Filmo Camera to your dealer and ask him for a little free inspection service. He'll give it to you cheerfully.

An oiling, cleaning, and general check-up is certainly advisable in advance of your summer vacation, for this is probably one of the times of the year when you take an abundance of movies, and they are pictures which you want to be *right*.

In the course of his check-up, your dealer may have occasion to make minor adjustments which will reassure you of smooth operation of your Filmo throughout your absence from the city. Or he may possibly uncover potential sources of future trouble which require more extensive work. In that event he will give you Bell & Howell's estimate on any necessary repairs before authorizing this work. It is the time required for such repairs that prompts us to urge you to have your Filmo checked over well in advance of your day of departure. Do it this week.

Events Worth Filming

Golf

June 23-25 National Open, Fresh Meadow Country Club, Flushing, L. I.
June 27-July 2 Intercollegiate Championship, Cascades Course, Hot Springs, Va.
June 27-30 New York State Golf Association, Junior Championship, Mt. Vernon, N. Y.
July 7-9 Canadian Open Championship, Ottawa Hunt and Golf Club, Ottawa,

Horse Racing

Ontario

June 10-July 5 Queens County Jockey Club, Aqueduct, L. I.

June 27-July 30 Arlington Park, near Chicago

Hunt Race Meetings

June 15 and 17 Eastern Horse Club,
The Country Club, Brookline, Mass.
June 18 Eastern Horse Club, "Raceland",
Estate of John R. Macomber,
Framingham Center, Mass.
July 9 Suffolk Hounds, Southampton, L. I.

Lawn Tennis

June 20-25 Intercollegiate Championships, Merion Cricket Club, Haverford, Pa.June 10-12 Annual Championships, Del Monte, Calif.

Olympic Games

July 30-Aug. 14 Los Angeles, Calif.

Polo

June 12-July 31 Meadow Brook Club
July 1-Sept. 1 Fleischmann Field, Serena,
Santa Barbara, Calif.
July 2-10 Fairfield Polo Club, Conn.
July 2-10 Broadmoor, Colo.
July 3-24 Rockaway Hunting Club

Rowing

June 20 Poughkeepsie Regatta,
Poughkeepsie, N. Y.
June 24 Yale v. Harvard, New London, Conn.
July 1-4 Olympic trials, Philadelphia, Pa.
July 7-9 Eight-oared Olympic final tryouts,
Lake Quinsigamond, Worcester, Mass.

Aug. 9-14 Olympic, Long Beach, Calif.

Yachting

June 18 Boat Club Regatta, Detroit
June 25 Bermuda Race
July 1 Stamford-Vineyard Race, start off
Shippan Point
July 16 Chicago-Mackinac, Port Huron-Mackinac Race
July 16-23 Larchmont race week
Aug. 5-12 Olympics, Los Angeles, Calif.
Aug. 6 Canada's Cup races, Rochester, N. Y.

Questions and • Answers •

Conducted by R. FAWN MITCHELL

Filming Rapid Action

Q. When filming football games, races, tennis, and other sports where there is fast action, isn't a speed of 16 frames per second a bit slow—so that when projected there is a tendency for the action to appear jerky? Would it not be better to take this action at say 24 frames per second and speed the projector up to compensate?

A. Blurriness and jerkiness of moving objects in a film depends entirely on the distance across the film that the object image moves during the exposure, and between one exposure and the next, respectively. These undesirable effects can be minimized or eliminated in several ways—by shooting from an oblique angle, by getting farther away. by using a lens of wider angle (shorter focal length), or by increasing the operating speed of the camera.

Halation

Q. If a brilliant light is in front of the camera but does not show in the view-finder, can I be sure that it will not harm

the picture by causing halation?

A. It is possible for the light rays to strike the glass of the lens even though the source of light itself may not be visible in the view-finder. Any brilliant light striking the lens glass will cause halation, which, however, may not always be serious. The seriousness depends upon the brilliance of the light in relation to the general illumination on the scene being filmed. Shade the lens with your hat or with your hand so as to keep the brilliant direct rays from striking its glass surface.

Mirror Shots

Q. When shooting into a mirror, how is the focusing distance determined?

A. The focusing distance is the distance from camera to mirror plus the distance from mirror to subject. To film a subject before a mirror in the same scene as the reflection of that subject in the mirror would call for using an intermediate focusing distance and as small a lens stop as possible to get the required depth of focus.

Film Speed

Q. How does the new supersensitive film compare in speed to ordinary pan film when used outdoors? When used under artificial light?

A. Supersensitive film is twice as fast as regular panchromatic film in daylight. In artificial light it is four times as fast. The difference is due to the fact that artificial light is composed largely of red and yellow rays, and the supersensitive film is more sensitive to these colors than the regular panchromatic film.

New Color Filters for use with + modern movie film +

Amber...green...red...neutral density

Bell & Howell now offers a new series of color filters, developed especially for use with today's panchromatic and supersensitive panchromatic film, and bearing factor symbols which are accurate for these films. These are the filters of the new line:

P-2X light amber and P-4X heavy amber filters, for use with panchromatic film, to give correct monochrome rendition of red and orange colors.

S & P-4X green and S & P red filters, for use with either film. The green filter is useful in filming landscapes. It vastly improves reproduction of green tones. The red filter is for special effects such as faked moonlight scenes, water scenes against the light, and for subjects predominantly red or brown. Tricky to use, but effective when you learn how.

S-2X and S-4X neutral density filters, to prevent over-exposure on bright scenes with supersensitive or panchromatic film.

These filters may be had mounted individually for the Cooke 1-inch F 3.5 Filmo Camera lens, at \$2.50 each. Or the pair described in each paragraph is available



mounted together in a metal slide fitting the Duplex Filter Holder for the 1-inch F 3.5 lens, at \$4.50. The Holder alone, \$2.50





Professionals endorse Cooke lenses by using them

Professional cinematographers everywhere use Cooke lenses. Only from Bell & Howell can you have these fine lenses for personal movie cameras. Cooke Telephoto lenses (at left) are offered for every requirement: 2-inch F 3.5 up to 6-inch 14.5. One of the most used is the 4-inch F 4.5 at \$60 for Filmo 70-A Cameras, or \$55 for Filmo 70-D and 75

For full color movies of startling brilliance

The B& H Cooke 1-inch F 1.8 Lens for Kodacolor and its Kodacolor filter ideally equips your Filmo for finest quality movies in full natural color. Also, the lens has the speed for successful black and white shots with the minimum of light. Complete with Kodacolor filter, as illustrated (at left), \$75. Lens alone, \$60

The B & H Projection Lens Assembly for Kodacolor (not illustrated) is all that is required for showing Kodacolor movies with any Filmo Projector. The special lens assembly includes a filter and special condenser. You have but to replace your monochrome projection lens with the Kodacolor projection lens assembly to project color movies of starting depth, clarity, and brilliance. Assembly complete, \$35. Without condenser (for Filmo Projectors without extra slot), \$30

Correct exposure readings in ten seconds

The B & H Model A Photometer (at right is calibrated for use with all Filmo Cameras. In 12 seconds, it gives correct exposure readings on the important protection of the subject, and while you see the subject. Easy to operate as a flashlight. Price, \$1-5. \$2 with case.)

The B & II Photometer for still photography ences accurate lens stop readings at shutter speeds from 1-25 of a second to 32 seconds. Price Str.50 (\$20 uith case.



BELL & HOWELL-FILMO

BELL & Howell Co., 1842 Larchmont Ave., Chicago New York, Hollywood, London B & H Co., Ltd. 18st. 1907
PERSONAL MOVIE CAMERAS — PROJECTORS — ACCESSORIES



Only a fine camera can take fine movies

- Filmo 70-D. Versatile, rugged, the master of all personal movie cameras. Seven speeds . . . Three-lens turret head . . . Variable viewfinder . . . Critical focuser if desired. In beautiful Sesamee-locked Mayfair case, \$245 and up.
- Filmo 75. Compact, light weight, handsome. A fine camera by itself... and the ideal SEC-OND camera for Kodacolor. Priced at only \$92, or \$99.50 with case. Completely equipped for Kodacolor, case included, only \$149.50, the lowest priced color movie camera.



This vacation take along a FILMO...

The old rime of Simple Simon fishing for whales in too shallow water has an application today. In 1932 as always, the results in any line are no better than the equipment used.

Experienced movie makers know that Filmo Personal Movie Cameras and Projectors mean fine movies because they are fine equipment, built by Bell & Howell, for 25 years makers of the cameras used in professional studios.

Bring back, from this year's vacation, Filmo movies that will be a joy to see and show your friends. See the nearby Filmo dealer. Or send the coupon. Bell & Howell Co., 1842 Larchmont Ave., Chicago; New York, Hollywood, London (B & H Co., Ltd.) Est. 1907.

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Please send me your book on personal movie making
equipment: "What You See, You Get."

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BELL & HOWELL FILMO TOPICS

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AUGUST-SEPTEMBER 1932

+ Make your film into a "movie" +

B & H Combination Rewinder and Splicer — This outfit comes complete with geared rewind, reel support, regular B & H Splicer, and cementing equipment. Mounted on neat crackle-finish base \$14.

B & H Splicer-You can make

a splice in mere seconds with this efficient device, which in-

cludes scraper, cement, and water bottle. Gives you the famous B & H diagonal lap, of

course. \$7.50.



B & plete you and want to sp way

B & H Film Editor—A complete editing outfit, enabling you to examine film illuminated and magnified, to cut out unwanted frames and scenes, and to splice in your titles. Has two-way geared rewinder. Complete outfit, \$40.



for Filmo 70 Cameras

The new Cooke 1-inch F 1.3 speed
lens, now available, has the fastest working speed yet satisfactorily attained in a Filmo 70 Camera
lens, and offers in addition a good

Get "impossible" shots with the

new Cooke 1-inch F 1.3 Lens

Used with supersensitive film, the new F 1.3 lens, one and ninetenths times as fast as the speedy F 1.8, will produce properly exposed pictures under light conditions that would formerly have been considered impossible.

degree of sharpness. Price \$75.





With Telephoto lenses your Filmo gets more than you see

The possibilities of your Filmo and of interesting movies are vastly increased with telephoto lens equipment. The crucial football play is brought up where you can see and analyze it. The neck-and-neck race down the stretch has its full close-up thrill. The scenic beauty of far away mountains appears in all its glory. Such long distance photography is truly satisfactory only with such finely made lenses as Cooke tele-

photos, choice of most *professional* cinematographers. Available in sizes from the 2-inch F 3.5 at \$60 to the 6-inch F 4.5 at \$95.

The eye may be fooled but not the B&H Photometer

"Whenever the stop indicated by the Photometer was used, I got perfect exposure. When occasionally I doubted the reading of the meter, I found that my judgment was in error." That's the testimony of W. S. Kidder of Kalamazoo, Mich., amateur movie-maker with many years of experience, on the perfection of the B & H Photometer as an exposure guide. With it, you get correct exposure readings in 10 seconds. Easy to operate as a flashlight. Model A is for movies. Model B for stills. Price, \$17.50; with case, \$20.

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Scale of Model B for stills



Model A Photometer for movies

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Only Bell & Howell supplies, for personal movie cameras, the world-famed Cooke lenses . . . the lenses preferred by experienced photographers everywhere. Only Filmo Cameras have Cooke lenses as standard equipment. Write for full information, stating your requirements and objectives.

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FILMO TOPICS

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EDWIN A. REEVE - Editor

AUGUST-SEPTEMBER, 1932

VOLUME 8

NUMBERS 8 and 9

SHOOTING THE ECLIPSE

Advice on filming the rare phenomenon which will occur on August 31

Verified by Mr. Robert R. McMath, Director of the McMath-Hulbert Observatory of the University of Michigan

•• N THE afternoon of August 31, those who are in certain portions of the New England states will have a most interesting opportunity that seldom comes to any given region even once in a lifetime. They may witness a solar eclipse—provided that the sky is clear.

The moon will pass between the earth and the sun, casting its shadow upon the earth, and, for a brief period, entirely concealing the sun. At from 2:10 to 2:25 P. M. Eastern Standard Time (which is used in all references to time in this article) the moon will begin to encroach upon the view of the sun. The black disc will gradually cut deeper and deeper into the sun until only a slender crescent remains, and pass on until, between 3:25 and 3:35, about 70 minutes after the first encroachment, it completely obscures the solar orb.

When the sun is totally eclipsed, its corona may be seen radiating from the black disc that is the moon. The corona of the August eclipse, occurring near a time of sunspot minimum, is likely to be of a spectacular type, showing long bright streamers extending from the equatorial regions to distances of several solar diameters, and delicate light rays extending from the poles. Due to the vastly

greater brilliance of the sun itself, the corona can only be seen during a total eclipse.

After a brief period, this spectacle will disappear as the edge of the sun begins to appear. Then there will follow the gradual emergence of the sun from behind the moon, requiring about 65 minutes for completion.

Most interesting effects may accompany the various phases of the eclipse—crescent-shaped light areas under trees which are projected images of the sun through small openings between the leaves, curious waving shadow bands on white surfaces, tiny beads of light coming through valleys on the moon as the last thin crescent of the sun disappears, and, visible from an elevation, the approach and passing of the moon's shadow over the face of the earth at the terrific rate of about 2000 miles per hour as the phase of totality begins and ends.

From locations within a strip about 100 miles wide, passing south and east through Quebec, northeastern Vermont, much of New Hampshire, southwestern Maine, and extreme northeastern Massachusetts as well as eastern-most Cape Cod, the eclipse will be seen in totality for

periods ranging from about 100 seconds on the central line to a few seconds near the borders of the path. All the rest of North America is included in the area of the partial phase, with the possible exception of the extreme west and southwest. But as all the striking and interesting phenomena occur within the path of totality, it is highly desirable to be within that path on August 31.

The most advantageous place from which to view the eclipse is some point on the central line, from where it may be seen in totality for the longest possible period. Points on or near this central line are: Lancaster and Conway, New Hampshire; Fryeburg and Saco, Maine. Larger cities within the path of totality are: Montreal, Quebec; Portland, Maine; Gloucester, Massachusetts.

If it were impossible to see the eclipse and film it too, we would recommend that you leave your Filmo at home on August 31. But since it is entirely practical for you to enjoy the spectacle and at the same time make a film record of it, we believe it in order to give these suggestions as to how to proceed. If you will watch and record the eclipse from outside the path of totality, the following directions which pertain to the filming of partial



COURTESY AMERICAN PHOTOGRAPHY

The sun's corona during a total eclipse. Photographed by the Naval Observatory Eclipse Expedition at Niuafoou Tonga in 1930

phases will apply closely to your case.

The duration of the eclipse, including both partial phases, will be about 2 hours and 15 minutes. An interesting record of the entire phenomenon can be taken on about 65 feet of film by exposing one frame every five seconds during the 70 minute partial phase, operating your FILMO at 8 speed during the total phase as well as for 10 or 15 seconds before and after, and then filming the final partial phase as directed for the initial phase. Or, if you are not adept at exposing single frames with the starting button, film the partial phases at intervals of about 2 minutes, exposing say 6 inches of film each time. This will result in approximatchy the same footage.

The regular 1-inch lens will hardly give a

large enough image. A 6-inch telephoto, the longest ordinarily available for Filmo, is recommended. It will give an image of the moon between 1/6th and 1/5th the height of the frame, and hence will allow sufficient area around the moon to include the sun's corona during the total phase.

Obviously, if you are to film the entire cclipse as suggested above or even any appreciable part of it, some means must be provided for keeping the sun accurately centered in the finder. Otherwise it will either move out of the camera's angle of vision, or, if inadequate efforts are made to follow it, it will jump around in the picture area so energetically as to make the film useless. A tripod is indispensable—preferably one such as is used for a small telescope, and fitted with an equatorial mount with a clock drive.

Lacking this, your B&H All-Metal Tripod with pam and tilt head may be used. In this case you will probably do better, in regard to the partial phases, to take separate 3-foot scenes at 16 speed at 10 minute intervals and without moving the camera during the scene, merely centering the image for each separate scenc. The previously given suggestion for filming the total phase at a constant 8-speed may be followed since within the duration of less than two minutes the sun should not move outside the field of the rigid camera. With the 6-inch lens the image will only travel about 1/8th the width of the film in two minutes.

It is difficult to give specific directions for exposure. In the partial phases, the chief consideration is to give as little exposure as possible, since the sun, not the sky, is your subject. With sufficiently short exposure to get good definition and avoid halation, the sky will be black. Use the smallest lens stop and the heaviest filter or combination of filters that you can obtain. A 12X filter is none too dense on lenses having F 16 as their smallest stop. Amber filters are of little value. A combination of red and neutral density filters is recommended. Bell & Howell is having red filters made in limited quantities, to fit the Cooke 2, 33/4 and 4-inch and the 6inch F 4.5 lenses, with this use especially in mind. The price is \$6.00 each. As the 6-inch lens has F 32 as its smallest stop, the new red filter would hardly need to be supplemented on this lens with a neutral density filter.

As the sun is reduced to a slender crescent, more exposure will be needed and the lens diaphragm should be opened up gradually to say F 5.6 when totality is near. If there are no clouds obscuring the sun, an aperture of F 5.6 should be large enough during totality if the filter is removed. Then, as the sun slowly emerges at the end of totality, the filter should be replaced and the exposure should be decreased as gradually as it was increased before.

If there is another movie camera in your party, don't both shoot at the sun. Let one camera try for the accompanying phenomena—the crescent-shaped shadows under trees, the swift approach of the moon's shadow, and the waving shadows which may be visible on light surfaces—as a sheet spread on the ground. Then you can put your films together in proper sequence and have the entire picture duplicated so that you may each have a more

(Continued on page seven)

FILMO NEWS PICTORIAL . . .



How these Filmo Cameras do travel! This earrying ease, which houses the Filmo 70-D of Mr. Reue Schleinitz, Milwaukee, has certainly acquired a cosmopolitan air, And the camera inside it has seen and recorded much of Europe



PHOTO BY NORR 3 HASELTON

Gny D. Haselton, Hollywood, a very enthusiastic Eyennocinematographer, filming what looks like a large purtion of California from the Half Dome overhanging rock in Yosemite National Park, His precarious position is almost a mile above the flour of the valley below



Virginia Brnce and John Gilbert look on while Monta Bell, director, explains the new BXII Varo lens, which Jahn Arnold, Metru-Goldwyn-Mayer head cameraman, had been trying out. This new lens for professional cameras is used for producing those very effective zooming or sympting shots. As the grank is turned, the focal length changes, giving a gradual or swift transition from long shot to closcup, or vice versa. The diaphragm is automatically uponed in proper relation to the increasing focal length, and vice versa, to maintain carrect exposure at all phases

HOW TO USE THE NEW COLOR FILTERS

ANNOUNCED on the inside back cover of this issue is a new line of color filters for the regular Filmo 70 and 70-D Camera 1-inch F 3.5 lens. These filters have been especially developed for use with Panehromatic and Supersensitive Panchromatic films. Their proper use with these films will permit you to get effects impossible with the now practically obsolete Orthochromatic film—and of course you will want to understand how to use them correctly and what results you can expect from them.

Omitting from consideration for a moment the new neutral density filters, the new line includes two amber filters for use with Panchromatic film, a P-2X and a P-4X ("P" indicating that the factor applies to Panchromatic film). There is also an S & P-4X green filter and an S & P red filter ("S & P" indicating that the factor applies to both Pan and Supersensitive Panfilm, although the benefits of the red and green filters will be most apparent when they are used with Supersensitive film). We'll explain later why no factor is given for the red filter.

To give you an idea of the applications of these three filters, we reproduce here three photographs. Unfortunately it is practically impossible to show on paper all the beauty of the scenes as projected from 16 mm. reversal film.

Panchromatic film is quite sensitive to yellows, oranges, and reds, but its sensitiveness to blues and violets remains in excess of what it should be to give a black and white reproduction of colors truly corresponding to their effect on the human eye. In the first picture, the amber filter held back the excess blue rays and so permitted the film to record the cloud formations, the beauty of which would have been

largely lost had not a filter been used. Furthermore, the absorption of blue rays by the filter eliminated some of the blue atmospheric haze and gave better definition to the distant hills and mountains.

Supersensitive Pan film "secs" colors almost the same as does the human eye. That is, it gives practically a true black and white rendition of colored objects. Thus it is unnecessary to use the amber filters with this film.



JAS E THOMPSON, KNOXVILLE

The P-4X filter is valuable for landscapes with clouds in the sky and for penetrating atmospheric haze in distant scenes



The S&P-4X green filter is particularly useful in reproducing the fine differences in green foliage color tones

With Pan film, however, it is best to use one or the other of the amber filters on all daylight shots except elose-ups of people and except scenes taken late in the afternoon when the yellow-ness of the light makes the amber filter superfluous. Use the P-4X amber filter when the light is strong enough, the P-2X amber filter when the light will not permit getting adequate exposure with the heavier filter. The P-4X calls for opening the lens two stops; the P-2X calls for opening the lens one stop.

The second picture illustrates the improvement in green foliage rendition accomplished by the S & P-4X green filter. The actual scene presented a great variety of greens, ranging from the bright yellowgreen of the water plants in the left foreground and the light grey-green of the trees to the left and right of the bridge, to rich dark greens on some of the other heavily-leaved trees. The many slightly varying tones of green are all pleasingly recorded as the eye sees them. The clouded sky is practically as well rendered as in the amber filter shot above (although the amber filter would do better than the green on blue skies with heavy white clouds). So we ean conclude that the green filter is fine for landscape photography where the scale of foliage tones is the source of the picture's beauty. This filter is useful with either Pan or Supersensitive Pan film, and on the average landscape subject its use calls for opening the lens two stops from the correct normal exposure without a filter.

The third picture illustrates a frequently presented application of the red filter. The red unit is primarily a special effect filter, and is adapted to such purposes as faking moonlight scenes, producing striking sunlit water scenes taken into the light, filming subjects predominantly red and brown, copying blueprints, and getting even more definition and contrast than the eye can see in extreme distance photography-of mountains, for instance. Experience with it or willingness to experiment with it is a requisite to its successful use. The extent to which the exposure must be modified to allow for the light absorbed by this filter varies from about 3X to 8X, depending so much on the nature of the light that no specific general factor can be assigned. The more red or yellow the subject or light, the less the modification necessary.



LEG J. HEFFEHNAN, N. Y.

The S&P red filter, among other applications, is used for "faking" moonlight scenes by shooting into a low sun

In view of its value in bringing out detail in distant subjects which are often best filmed with a telephoto lens, the red filter is now being mounted to fit the following Cooke telephotos for FILMO Cameras: 2-inch F 3.5, 334-inch F 3.3, 4-inch F 4.5. In the article in this issue on filming the eclipse of the sun, the 6-inch lens

with this red filter is recommended.

The neutral density filters have no color correction value whatever. Their function is purely that of reducing the amount of light admitted. This is done as far as possible (and enough for most subjects) by means of the lens diaphragms. But the diaphragm of the regular Filmo lens can-

not be closed beyond F 16, and when using Supersensitive Pan film on such subjects as water, beach, and snow scenes in bright sunlight exposures of F 22 and F 32 are sometimes required. It is not desirable to reduce the exposure by means of an amber filter because this would cause over-correction of the colors, the film itself being well balanced as to color sensitivity. So the neutral density filters are used.

With the lens set at F 16, the S & P-2X neutral density filter will result in an exposure equal to F 22, the S & P-4X an exposure equivalent to F 32. These two filters need only be used when the lens itself cannot

be adjusted to give a sufficiently small exposure. The same use of the neutral density filters may be made with Pan film, using the same factors.

Used on the 20 mm. F 3.5 lens of the Filmo 75 camera, all these new filters vignette the corners slightly at the smaller stops, making the corners dark.

BEWARE OF BOOTLEG BULBS!

PROJECTION lamps as supplied by the lamp manufacturers are fitted with the familiar threaded base. It is not practical to hold the lamp in the projector by this base, since the row of lamp filaments must be very precisely aligned behind and at a definite distance from the projector aperture, and also must be at an exact right angle to the axis of the optical system; otherwise an imposing percentage of the effective light will be lost.

To insure the required precise positioning, the lamp is fitted in the B&H factory with a "prefocusing ring," a brass ring which fits up snugly against a machined ring in the projector lamp housing, thus obtaining correct vertical alignment. A vertically projecting tongue on the prefocusing ring fits into a slot in the projector to prevent the lamp from being rotated out of correct position.

The prefocusing rings can only be pre-

cisely attached by placing the lamps in a special B&H fixture, shown here in use. Sighting through the windows of this fixture, the operator shifts the lamp until its filaments line up accurately in all three planes with the fine cross-wire guides. Then, locking the lamp firmly in that correct position, he solders on the prefocusing ring, which the fixture holds correctly in relation to the lamp base until the solder has set firmly. The position of the filaments is then such that they are exactly on the axis of the optical system as well as in true focal position.

There are cheaper ways of performing every operation, and usually these methods produce unsatisfactory results. This is true in the case of "basing" lamps. Occasionally projection lamps are offered onto which B&H prefocusing rings (removed from burnt-ont lamps) have been soldered by hand or with inadequate fix-

(Continued on page seven)



Preparing to attach a prefocusing ring to a Filmo Projector lamp by means of a special B&H fixture



A Buffalo school class absorbing a historical episode through motion pictures shown with a Filmo Projector. Inset: Alan H. Nicol, director of visual instruction

MOVIES IN INDUSTRY.. EDUCATION.. MEDICINE.

Talkies announce new Plymouth car

PLYMOUTH Motor Corp., for two years user of talkies in sales work, used a new sound film on a huge scale in April in announcing the 1932 Plymouth. In one week, the sales film on the new model was presented to more than two and one-half million people. Fifteen B&H Filmophones gave excellent service in helping to do this intensive job. Since announcement week, 60 Plymouth sales promotional men have shown the film daily to diversified audiences ranging from dealers and their organizations to public showings in theaters and in dealers' showrooms.

Visual education in Buffalo

BUFFALO schools are firm believers in and extensive users of motion pictures for educational purposes. Half the public schools in that city already have classroom projectors, and the rest are being supplied rapidly. Twenty-four Filmo Projectors were recently purchased to extend the scope of the visual instruction work (see photo above). The school system's film library of between 400 and 500 subjects includes the 47 recls of United States history film produced at Yale University, as well as films which teach geography, health, nature study, athletics, and biographies of famous men.

"Wisconsin—Its Government at Work"

THE above title describes an educational film recently produced and added to the extensive film rental library of the Bureau of Visual Instruction, University of Wisconsin, Extension Division. A joint resolution of the State Senate and Assembly commended the Bureau on the making of this film, stating that it "is undoubtedly

of great educational value and represents a distinct addition to the educational work of the Extension Division."

Shown in the Supreme Court Chambers "location" scene below are: George Bastier, cinematographer for the Burton Holmes Laboratories, at the Bell & Howell professional camera, Homer Montague, operating the Bureau's B&H Eyemo Camera, Miss Helen Osterbind, Secretary of the Bureau, Dean C. D. Snell and J. J. Kammer of the Extension Division, and J. E. Hansen, Chief of the Bureau.

After-treatment of infantile paralysis

THE Georgia Warm Springs Foundation, Warm Springs, Georgia, a center for the study and after-treatment of infantile paralysis, is using three 16 mm. films to acquaint physicians and the public with its work. The films are 200, 400, and 600 feet long, respectively, and are comprehensive in proportion to their length. All three films were produced by a former patient with his FILMO Camera, and a Bell & Howell Projector is used by Dr. LeRoy W. Hubbard, Director of Extension, in showing the films. Governor Franklin D. Roosevelt, president of the Board of Trustees of the Foundation, and his family are shown in the 400-foot film.

Health Film Library

THE health education department of The Public Health Center, at Oakland, California, offers 18 reels of 16 mm. film on health subjects free to the schools and welfare agencies of Alameda County. A FILMO Projector is available without charge for showing these films.

Producing the film "Wisconsin-Its Government at Work". See text



Why Use a Tripod?

PROFESSIONAL motion pictures are invariably taken with the camera mounted upon a firm tripod. True, professional cameras are too large and heavy to be hand held, but, aside from that, tripods are used because that practice results in better pictures.

No matter how steadily you can hold your Filmo and how slowly and evenly you can "pam" or tilt, you can do better with a good tripod. Remember that the slightest movement of the camera will be magnified many times in projection—that the slightest jerkiness in pamming or tilting will cause jumpy and perhaps blurred screen pictures. Use a tripod and you'll be able to let the subject do all the moving. The answer to the question "why use a tripod," is this: moving pictures mean moving subjects, not moving camera.

Practos Exposure Meter



THE Practos Exposure Meter, now available from Bell & Howell through Filmo dealers, is an accurate, simple, compact, and inexpensive instrument for use with movie cameras. Readings are general for the entire subject area.

The Practos Meter is used by sighting through the eyecup toward the subject. Three sharply defined numbers are seen. The front ring is turned until only the right hand number is clearly readable. Two additional checks on correct reading are then offered. The middle number should be barely readable and the left hand number so dark that it cannot be read. Then the correct lens stop for 16 speed on movie cameras is read from the scale opposite the figure 16. Likewise, the correct lens stop for any other eamera speed is read directly.

Automatic methods are provided on the meter for modifying exposure readings for different types of film and for the various color filter factors. A depth of focus table is also provided. The moderate price, \$5.75, includes a leather earrying case.

Shooting the Eclipse

(Continued from page two)

interesting print than either of you could produce alone. And if your circle of movie making friends is large enough, it might be well to divide the party among points separated by many miles, to minimize the danger of none of the group getting pictures because of the inopportune appearance of an obscuring cloud.

To protect your eyes from serious injury, do not look at the sun before totality except through a very dense photographie negative or a smoked glass. Even with this protection, avoid fatiguing your eyes so much by viewing the partial phase that you will risk not seeing all the splendor of the brief and rare total phase.

Beware of Bootleg Bulbs!

(Continued from page five)

tures. Often these rings are so inaccurately placed that the lamp is badly out of alignment, with the result that from 25 to 75 per cent of the illuminating efficiency of the lamp is lost.

To be sure that the projection lamps you buy are properly mounted, insist that they come to you in blue Bell & Howell boxes, *sealed* with Bell & Howell seals.

Why the Slight Shock from the JL Projector?

STATIC which interferes with radio reception can be caused by loose connections and other minor derangements in any electrical circuit. It can also be caused by the normal operation of faultless electrical apparatus which happens to be in "tune" with the radio involved.

The new Filmo JL Projector is equipped with a radio interference eliminator which prevents it from causing objectionable static disturbances, even though the two machines be operated off the same wall plug. The eliminator includes an electrical condenser, the function of which is to absorb the energy emitted by surges and electrical transients in the projector's electrical circuits. Because of the energy sometimes stored in this condenser, it is occasionally possible to get a very slight static shock from the projector when contact is accidentally established through the body with a ground or partial ground. This shock is harmless. It is comparable to the familiar static shock received upon touching a ground, such as a radiator or a light switch, after walking over a rug in a dry, steam heated room.

The advantages of the radio interference eliminator, in the opinion of most people, outweigh the minor disadvantages of an occasional slight static shock. The eliminator can be shorted or removed very simply if it is not desired in your JL Projector.

Hollywood Personal Movie Meetings Prove Popular

THE monthly "Open House" meetings inaugurated recently at Bell & Howell's Hollywood branch are proving popular among the personal movie enthusiasts of Southern California. Worthwhile programs are prepared for each meeting. The subject for May was the proper use of artificial lights, discussed and demonstrated by J. A. Dubray. The June speaker was William Stull, Associate Editor of the American Cinematographer, who talked on the use of color filters. July 15 was "Olympic Night," the program being composed almost entirely of sport films, including some of Olympic athletes.

Admittance to these interesting meetings is by ticket, and the tickets may be had gratis upon request to Bell & Howell Co., 716 N. La Brea Ave., Hollywood, as well as information on future meeting dates and subjects.

August "Movie Makers"

THE August issue of the Amateur Cinema League's official publication. Movie Makers, presents a diversity of interesting and helpful subject matter, as indicated by the following excerpts from the contents table: Reeling While They Ride 'Em, The Night Boat, Greece Moves West, Seashore Stunts, Mountain Madness, Ilits and Misses, And Then I Went Home. There are also the usual valuable departments: The Clinic, Amateur Clubs, News of the Industry, Close-ups, Film Releases. If you are not a subscriber, write to the league office, 105 W, 40th St., New York City, for a free sample copy.

The American Cinematographer, 1222 Guaranty Bldg., Hollywood, professional cameraman's magazine, carries an interesting 16 mm, department as well as other articles worth the personal movie maker's attention.

German Personal Movie Manual

INTERESTINGLY written and technically helpful books on amateur movie making are by no means limited to the English language nowadays. The new book, "So wollen wir filmen!", by A. Stuler, Nordlingen, Germany, whose helpful suggestions have from time to time appeared in the columns of Filmo Topics, is just such a book and attests the truly world-wide interest now being shown in 16 mm. filming.

Chapters are devoted to titling, editing, types and structures peculiar to certain purposes to which 16 mm. films are applied, need for manuscript but possibilities inherent in casual "shots" properly combined, sample scenarios, technical suggestions, etc. And there is hardly one of the 96 pages that does not contain from one to a dozen illustrative pictures and diagrams.

A short bibliography is appended. Filmo Topics and Movie Makers are the only English language references given. The publisher is Franckh'sche Verlagshandlung, Stuttgart, Germany.

Missing Equipment

Filmo 70 Cameras

No. 5787. C. L. Neal, 420 E. Second St., Morristown, N. J.

No. 20116. Arthur C. Freidel, 215 Wallace St., Syracuse, N. Y.

No. 31496. L. Houdek, 126 S. Central Ave., Chicago, Ill.

No. 35279, 3-speed. J. Okrent, 220 Boscobel Pl., New York City.

No. 46171. J. J. Sullivan, 168 Sussex St., Sydney, Australia.

No. 53493. Bureau of Special Investigation, 580 Market St., San Francisco.

No. 148645, 70-DA. Herbert & Huesgen Co., 18 E. 42nd St., New York City.

70-D dummy camera. Gillette Camera Stores, 117 Park Ave., New York City.

Filmo 75 Camera

No. 42332. Almer Coe & Co., 78 E. Jackson Blvd., Chicago, Ill.

Filmo Projectors

No. 17170. Seidman Photo Service, 125 W. 45th St., New York City.

No. 49085. J. J. Sullivan, 168 Sussex St., Sydney, Australia.

No. 65385. Eastman Kodak Stores, Inc., Pittsburgh, Pa

No. 149011, JL Model. Herbert & Huesgen Co., 18 E. 42nd St., New York City.

Eyemo Camera No. 2334. Photoart House, Milwaukee, Wis.

Questions andAnswers

Conducted by R. FAWN MITCHELL

Morgana Color Process

- Q. Can all Filmo lenses be used on the Morgana Camera?
- A. Yes, except a few lenses whose rear elements project so far back that they would interfere with the oscillating filter. Any lens that allows the Filmo 70-D turnet to be turned without interference is O.K. for Morgana.
- Q. Why cannot my present Filmo Camera and Projector be adapted for Morgana?
- A. So much work is involved in converting them, especially the projector, that the cost is prohibitive. It is far more economical to turn your present equipment in to your dealer in trade.
- Q. Why can't the 70-D camera be adapted for Morgana, so as to make the turret head available?
- A. Certain space must be allowed in the camera head for the oscillating filter, and this space is not available in the turret head.
- Q. How will the Morgana system adapt to time lapse work?
- A. Satisfactorily. Two single frames should be exposed at each interval, instead of one frame as in black and white lapse time work. It would probably be entirely satisfactory to take single exposures in the regular way but at shorter intervals. Theoretically, it is better to follow the first mentioned method.
- Q. What effect will be obtained by running the Morgana Camera at 32 pictures per second? Will this help to get away from color fringing?
- A. Operating the camera at 32 frames per

second will merely slow the action on the screen. It will not reduce color fringing except that, with the action slowed down, fringing will not be noticed so readily.

- Q. Should Morgana film taken at over 24 frames per second be projected faster than 24 frames?
- A. No. It is impractical to run the Morgana Projector faster than this.
- Q. What care will have to be taken in making splices in Morgana film?
- A. Be sure to maintain the alternation of green and red frames. The camera exposes a little black mark opposite every second frame (i.e., the green frames).
- Q. Why is an all red filter used in the red section of the Morgana Projector filter, but several colors in the blue-green section?
- A. The reason for using several filters in the blue-green segment is to get the correct shade by blending, since this desired color is not available in a single unit.
- Q. Is the Morgana Camera entirely satisfactory for all black and white work with all regular lenses?
- A. Yes. Merely remove the Morgana filter unit. The only things lost in using the camera in this way are the 48 and 64 speeds and the turret.
- Q. Can Kodacolor pictures be taken with the Filmo Morgana Camera?
- A. Yes, by removing the Morgana filter unit and using the usual speed lens and Kodacolor film and filter.
- Q. What may we expect the life of the Morgana filters to be?
- A. The filters should last almost indefinitely if given reasonable care. The only danger is from finger marks or other carelessness in handling. As far as the colors are concerned, the filters are stable.

Only a few 1932 Filmo Topics binders left—Order before they're gone



This deep red fabricoid Filmo Topics binder, which holds twelve issues firmly by means of metal rods, provides the ideal filing method. It will keep your copies together, always available for reference. Only a few are left, and we don't expect to order more this year. So get your binder while they last.

The price? Only \$1.50 postpaid.

BELL & HOWELL COMPANY 1842 Larchmont Ave., Chicago

COLOR MOVIES

on regular film... with any lens... under any photographic light... permitting duplicate prints... up to 10 feet wide on the screen...



With the new Filmo Morgana Camera you can now take color movies by the best two-color additive process yet developed. It uses regular panchromatic reversal film, any Filmo 70-D lens, any photographic light!

You can show these color pictures as large as 10 feet wide with the Filmo Morgana Projector . . . and have duplicates made if you wish, just as from black and white reversal film.

The Filmo Morgana Camera has five film speeds—8, 12, 16, 24, and 32—Cooke 1-inch F 3.5 focusing lens, and two Morgana two-color filter units—one for daylight, the other for incandescent light. Price, \$190 (all prices include federal tax).

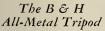
The Filmo Morgana Projector, with 300-watt, 110-volt lamp, and color wheel, is \$210. Both camera and projector are instantly convertible for showing monochrome movies.



Filmo 70 Morgana Camera

A new projection lens for maximum size with minimum throw

New—The Cooke .64-inch projection lens for Filmo Projectors (not illustrated). A lens with a wider angle than any other lens for this machine. It gives maximum picture size with minimum throw. At 24 inches the picture is 14 x 11 inches. Hence this lens is invaluable for window displays (with Filmo Continuous Projector), and in conventions, exhibits, and auditoriums where a long throw is often impractical. The .64-inch lens has remarkable covering power and sharpness of definition. Price, \$40.



Everything for personal movies of true professional quality is found in the complete B & H line. One example: The B & H All-Metal Tripod. It gives the rigidity which eliminates blur and jumpiness from the projected movie, and the smooth, steady pams and tilts seen in professional films. Self-locking tubular legs. Strong enough to support a 180 pound man; light enough to be carried with ease. Price, \$36.





New B & H Color Filters for modern film

This new series of B & H color filters . . . amber, green, red, and neutral density . . . was developed especially for use with today's panchromatic and supersensitive film. The series includes:

P-2X light amber and P-4X heavy amber filters for general use with panchromatic film. S & P-4X green and S & P red filters for either panchromatic or supersensitive film: green especially useful for landscapes; red for special effects. S-2X and S-4X neutral density filters to prevent over-exposure on bright scenes. Each, mounted individually for Cooke 1-inch F 3.5 lens, \$2.50. Pair in metal slide fitting Duplex Holder, \$4.50.

BELL & FILMO

BELL & Howell Co., 1842 Larchmont Avenue, Chicago, New York, Hollywood, London B & H Co., Ltd | Est 1907

PERSONAL MOVIE CAMERAS · PROJECTORS · ACCESSORIES

An Improved Filmo Projector

. . and at a Lower Price

The new Model M \$150



OW, more advantages than ever come to you in a Filmo Projector, and at greatly reduced cost. The new Filmo Model M Projector at \$150 gives you every precision mechanical feature of Standard Filmo 57 design, plus three striking improvements:

(1) A new projection lamp gives you full 300-watt illumination, 20 percent more than the 250-watt lamp. At \$7.00 extra it may be had with 400-watt lamp.

(2) Projector is mounted on a new square base giving great stability; base forms bottom of carrying case when Projector is being carried.

(3) The Model M is a non-folding Projector. The machine is fully set up, all ready for service whenever you remove case.

Review these Filmo features, as proof that nowhere can you get so much for your money as in the new Model M at the new low price: (a) steady, flickerless pictures due to the exclusive Filmo 9-to-1 mechanical movement (b) powerful direct lighting system (c) automatic framing (d) reverse movement at touch of finger (e) still projection of any frame (f) interchangeable lenses (g) forced air cooling system (h) can be equipped for Kodacolor (i) both geared hand rewind and automatic belt rewind (j) tilt-screw for quick centering on screen (k) true, nine-year-proved Bell & Howell quality, long life, and dependability.

The new Filmo Model M Projector may also be had without reverse lever and without starting clutch at \$135. See your dealer today or write for complete literature.

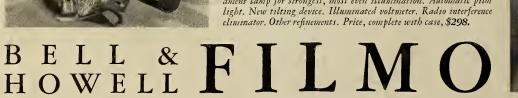


What You See, You Get-with Filmo

The Filmo 70-D Camera is the undisputed master of all personal movie cameras. It has a three-lens turret head, enabling you to switch from one lens to another in an instant. Its seven film speeds give you the slowest of s-l-o-w movies and the fastest, too. Its variable view-finder automatically frames your picture, regardless of the focal length of the lens. Price, \$245 and up with Sesamee-locked Mayfair case. Other Filmo Cameras from \$92 and up. The Filmo 75 Camera, equipped with Kodacolor filters and speed lens at \$149.50, is the lowest-priced Kodacolor equipped movie camera. Bell & Howell pays the tax.

The New Filmo JL—Finest of Projectors

Here's the finest 16 mm. projector yet made. Completely answers every projection need from small living room to large auditorium. 100% gear driven. Automatic rewind. New 400 watt, 100 volt Biplane Filament lamp for strongest, most even illumination. Automatic pilot light. New tilting device. Illuminated voltmeter. Radio interference eliminator. Other refinements. Price, complete with case, \$298.



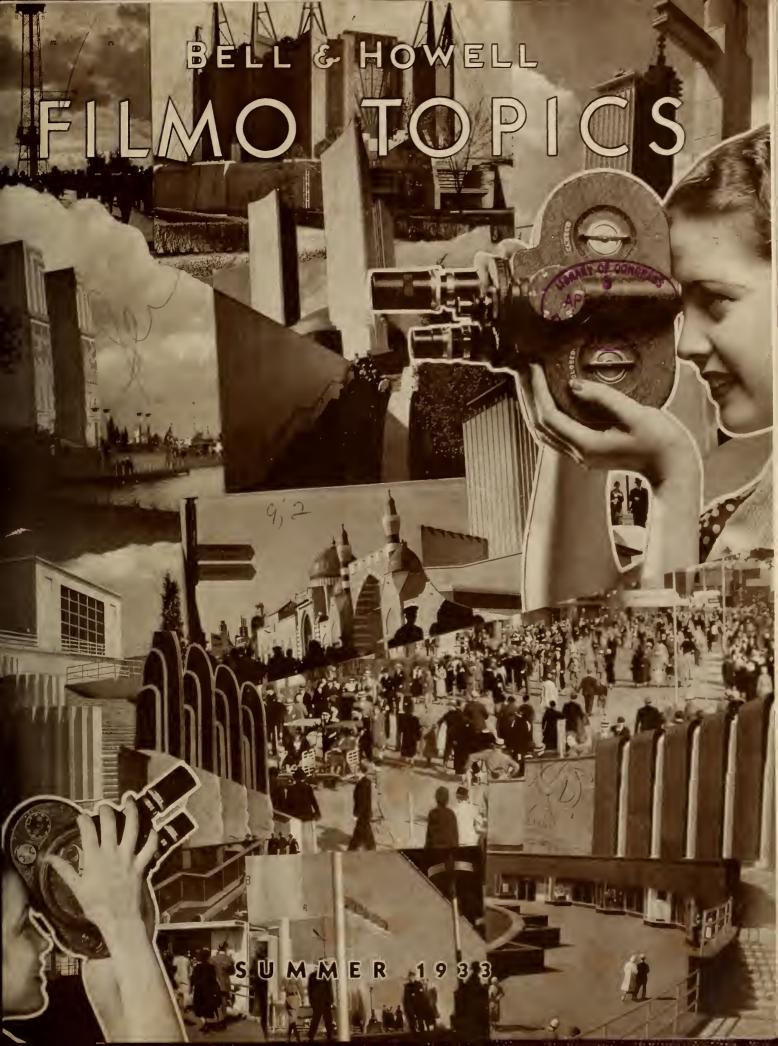


Personal Movie Cameras and Projectors

Bell & Howell Co., 1842 Larchmont Avenue, Chicago, Ill.; New York, Hollywood, London (B & H Co., Ltd.) Established 1907

Bell & Howell's quarter century of experience in making the professional cameras preferred by leading film producers enables this company to design and build Filmo Personal Movie Cameras and Projectors that assure you

PROFESSIONAL RESULTS WITH AMATEUR EASE



A New, Semi-Professional FILMO

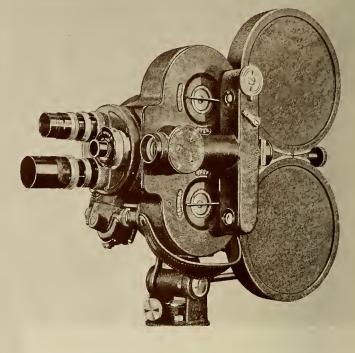
for advanced amateurs, movie clubs, physicians, surgeons, scientists, naturalists, expeditions, industrial film producers, and other serious movie makers



THE new Filmo Semi-Professional Camera opens broader fields to serious movie makers.

Film capacity is increased to 200 feet by the addition of an external magazine. This does not interfere with alternate use by the internal loading of 100-foot spools. An electric motor, your choice of 12- or 110-volt, provides constantly uniform speed with no periodic pauses for winding—two definite requirements in filming for sound synchronization. 12-volt dry cell batteries are light, compact, and enduring.

An 8 to 1 hand crank, usable when the motor is removed, permits continuing a scene after the spring motor has run



down. The camera governor controls the speed accurately, regardless of whether electric motor, hand crank, or spring motor is used. For lap dissolves and (when a mask box is added) for double exposures, the film may be moved backward with the hand crank.

A newly designed range finder is built into the camera door. Subject distance is accurately, quickly determined. The basis of this camera is the time-tried Filmo 70-DA. This provides these features of versatility:

Three-lens turret head, with each lens instantly interchangeable, and with a complete line of speed, wide angle, and telephoto lenses from which to choose.

Seven governor-controlled film speeds—8, 12, 16, 24, 32, 48, and 64 frames per second.

Variable viewfinder, adjustable to match the field areas of six different focal length lenses.

Critical Focuser, for focusing on the 25 diameter magnified subject through the photographic lens.

Taking single frame exposures is simplified by provision for locking the starting button gravity catch out of operation.

The new Filmo Camera is built on special order. Any or all of its new features can be applied to existing Filmo 70-D Cameras. Write for full details. Bell & Howell Company, 1842 Larchmont Ave., Chicago.

BELL & HOWELL · FILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

Made by the world's leading manufacturers of first quality professional and personal motion picture equipment



AROUND THE FAIR with Burton Holmes

and other 16 mm. safety films of

A Century of Progress Exposition

Distributed exclusively by Bell & Howell Company

Around the Fair with Burton Holmes

No. CH-4. 400 Feet. \$20

If you've visited the Fair you'll want this film to splice in with the pictures you took there. If you haven't seen the Fair, this excellent film will give you a vivid impression of it. "Around the Fair" is a complete movie tour of the Fair grounds by land and water, with stop-overs for detailed pictures of especially interesting features and of most of the larger buildings.

Around the Fair with Burton Holmes

No. CH-3. 100 Feet. \$5.

A condensed version of the 400-foot subject described above.

Streets of Paris

No. CH-5. 100 Feet. \$5.

Artists and models, sidewalk cafes, musicians, dancers, gendarmes, sailors, girls, vendors, and sidewalk stands where artists sell their wares.

Wings of a Century

No. CH-7, 100 Feet, \$5.

The pageant of transportation, from the pony express to today's de luxe trains and planes.

The Lama Temple

No. CH-8, 100 Feet, \$5.

The Golden Temple of Jehol, built in China and brought to Chicago in 28,000 pieces under the direction of Dr. Sven Hedin, noted Swedish explorer, is the interesting subject of this film, which is particularly rare and desirable because of its interior views of the lavish decorations and furnishings, the Buddhas and other sacred images, and the priests engaged in their rituals.

The Belgian Village

No. CH-9. 100 Feet. \$5.

An authentic replica of a sixteenth century Belgian village, beautifully pictured. The life, customs, and occupations of the people are portrayed, as well as the architecture.

Enehanted Island

No. CH-10, 100 Feet. \$5,

The children's center of World's Fair attractions, with a miniature train, child-size automobiles, boats, a ferris wheel, merry-go-rounds, and other rides, as well as performing animals, a magic island, a juvenile theater, and a youngsters' playground.

Indian Village

No. CH-11, 100 Feet. \$5.

The American Indian encampments at the Fair. Navajo hogans, family groups, rug weaving, silver craftsmen, ceremonial dances. Hopi pueblo dwelling and dances. Sioux ceremonies. Winnebago Indians at their crafts.

The Fair at Night

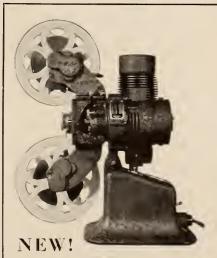
No. CH-16. 100 Feet. \$5.

A film which is essential to any complete movie record of the Fair, for when illuminated at night the Fair takes on a new and unforgettable aspect.

Opening Day Ceremonies

No. CH-2. 100 Feet. \$5.

Events on opening day at the Fair.



FILMO JS PROJECTOR

750-watt Hlumination

The ideal 16 mm. projector for showing your World's Fair and other movies before large audiences.

Distributed Exclusively by-

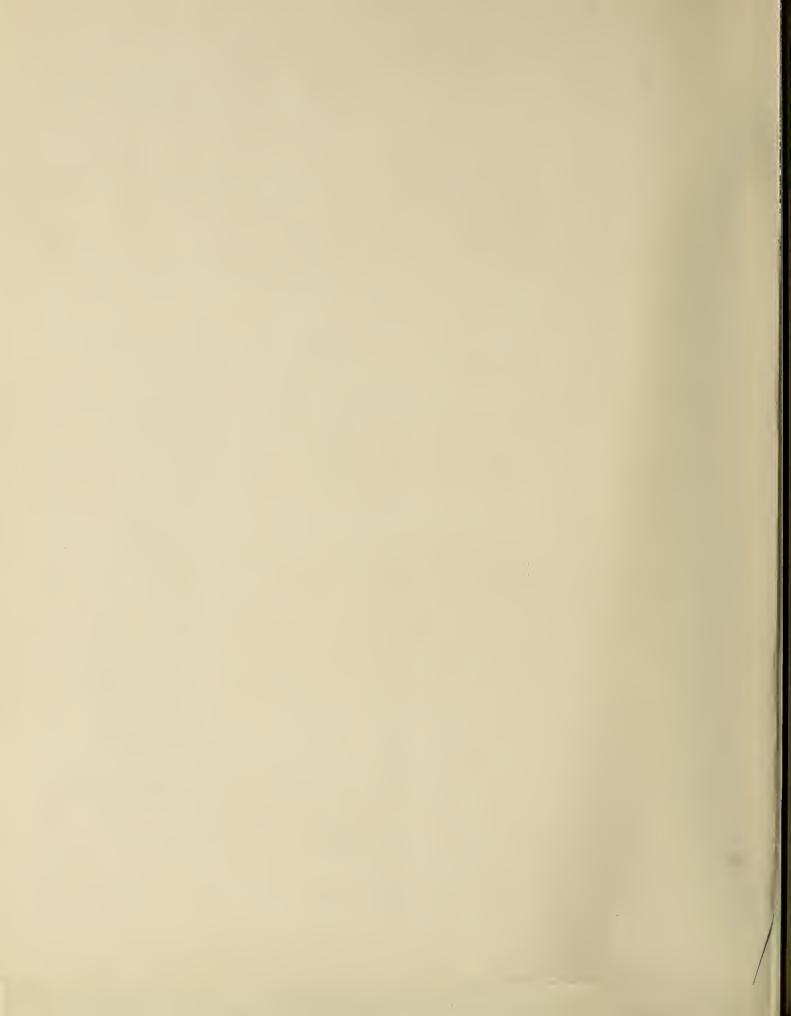
BELL & HOWELL COMPANY

1842 LARCHMONT AVENUE, CHICAGO

NEW YORK

HOLLYWOOD

LONDON (B&H CO., Ltd.)



BELL & HOWELL

FILMO TOPICS

Published in the interests of personal motion picture makers and users by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

VOLUME 9 SUMMER 1933 NUMBER 2

YOU'LL SEE MOVIES EVERYWHERE AT THE WORLD'S FAIR

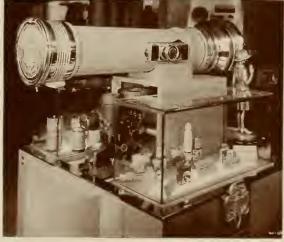
And most of them are being shown with Bell & Howell Filmo Projectors

A Century of Progress Exposition, which has already opened its broad gates to the world as this is written, offers the movie maker rare opportunities for taking pictures of unusual and lasting interest. What you will find to film at the Fair was the subject of an article in the preceding issue of Filmo Topics. And, were we to write that article now, after having actually seen just a few of the varied attractions, we could not help but convince even the most skeptical that to visit the Fair without his Filmo would be to regret it from his first hour inside the gates.

But entirely aside from taking

movies, anyone interested in motion pictures, and anyone concerned with the advertising, selling, educating, or good will building problems of any organization or institution, whether commercial or social, will benefit from seeing the many successful applications of motion pictures which are very much in evidence at the Fair.

Time has not yet permitted making a complete survey of the exhibitors who are showing movies. But those discussed below are definitely known to be presenting motion pictures in their displays. Every



A unique movie presentation by the Union Carhide Co. The Filmo JL projects a girl scont film on a circular screen which replaces the lens in this giant girl scout flashlight. A 400-foot continuous attachment is used

exhibitor mentioned is using one or more Bell & Howell Filmo Projectors. There are about sixty B & H 16 mm. Projectors, sound and silent, most of them with B & H attachments for continuous operation, at work at the Fair—several times more than the number of 16 mm, projectors of all other makes together! Continual use for twelve hours and more a day over a period of one hundred and fifty days is a grueling assignment for any mechanism. Ex-

hibitors, appreciating this fact, paid Bell & Howell equipment a sincere compliment in selecting it so overwhelmingly.

Associated Glass Manufacturers (Pittsburgh Plate Glass Company and Libbey-Owens-Ford Glass Company), in an elaborate, interesting display on the ground floor of the Travel & Transport building, are using a Filmosound 16 mm. sound-on-film reproducer and two Filmo R Projectors to show the manufacture and uses of various kinds of glass.

Central Station Industry Exhibit, second floor, Electric building, portrays the drama of electricity from its generation to its many uses of today and tomorrow. In a modern living room a B & H Filmosound

provides talkies or silent movies. A Filmo Projector shows educational films in a model school room. Two other Filmo Projectors, one at each end of a 95-foot diorama which is one of the most fascinating features of the Fair, show films which explain the operation of steam and hydroelectric generating plants, respectively. Another Filmo-projected silent picture portrays life and work on an electrified farm, while a fifth Filmo Projector shows

Chicago as a center of commerce.

Chicago Board of Education, in an exhibit in the public welfare section of the Social Science building, is projecting a film showing the work being done in training handicapped children at Chicago's special schools for this purpose. The two-reel film was made with a Filmo Camera and is shown with a Filmo JL Projector.

Christian Science Publishing Co., in its own building on the mainland at about Twentieth Street, is showing a silent film devoted to creating interest in its daily newspaper, the Christian Science Monitor. A Filmo Continuous Projector is used.

Colorado has devoted its entire hall in the Court of States to a theater in which sound movies describing the recreational, agricultural, and industrial advantages of the state are presented with a B & H Filmosound.

Dentists' Supply Co. of New York, in the Hall of Science, is showing silent movies dealing with the uses of its products, employing four Filmo Projectors.

A. B. Dick Company, General Exhibits group, third pavilion, is using a Filmo Continuous Projector to take visitors to the Orient to contrast skilled hand labor with efficient American manufacturing methods in the development of the Mimeograph process, and to show the manufacture of stencil paper.

Felt & Tarrant Mfg. Co., Booth 12, Group T, General Exhibits building, shows how

One of five Filmo Continuous Projectors one of the rilino continuous Projectors behind the walls of the International Har-vester Company exhibit. When the film stops, a colored still picture is projected until the next visitor presses the film starting button the comptometer is used to effect speed, accuracy, and economy in offices of nationally known organizations throughout the United States and Europe, using for this purpose a 500-foot film shown with a Filmo Projector.

Georgia Warm Springs Foundation, Booth 1, Group K, Hall of Science, with a Filmo Continuous Projector, is showing an informative film picturing its work in the study and after-treatment of infantile paralysis.

Guide Lamp Corporation, in the General Motors building, is showing its film, "Making Daylight Out of Darkness", with a Filmo Continuous Projector. The film shows the history of automobile road illumination up to this firm's multibeam lighting.

Hawaii, its scenery, customs, commerce, and tourist attractions, may be seen in motion pictures with appropriate sound accompaniment in Hawaiian Headquarters on the ground floor of the Federal building, in the north wing. The projector is a Filmo.

Hild Floor Machine Co., in Booth L 23 in the Hall of Science, is using a Filmo Continuous Projector to show a film picturing the refinishing and care of floors with its equipment.

Household Finance Corporation has devoted a portion of its beautifully conceived exhibit on the second floor of the Hall of Social Science to what is said to be the smallest and most modern movie theater in the world. Here two B & H Filmosounds present a talkie, "Financing the Family", telling of the need for small personal loans and how this need is met. To the movies is credited one-half of the accomplishment of the exhibit.

Illinois Central System, in a display which gets much attention even among the many unusually interesting exhibits on the ground floor of the Travel & Transport building, is using a Filmo Continuous Projector to show an appealing film picturing the various resort sections served by the Illinois Central, as well as foreign lands nearby.

International Harvester Company, at the north end of the Agricultural building, is showing five excellent films with as many Filmo Continuous Projectors, operated by a button pressed by the spectator. These films picture the production of corn and (Continued on page eight)

Left-Projection booth of the Household Finance model 22-seat theater, showing the two B & H Filmosounds with 400-foot continuous attachments



FILMO NEWS PICTORIAL ...



PAUL CWOJDZINSKI

Anthony Fokker, internationally renowned airplane designer, enjoying motion pictures in his cabin aboard the "Europa" with his new Filmo JL Projector



ACME PHOTO

Clark Gable, with his Filmo 70-D Camera, taking a personal close-up of Helen Hayes during a lull in activities on the Metro-Galdwyn-Mayer lot in Hollywood

A production scene during the filming of "The Pledge's Plight," a recent photoplay creation of the University of Sonthern California Cinema Club, Notice the use bring made of reflectors to east light into too-deep shadows. The man behind the Filmo 70-D Camera is B. K. Gillespie, a retired business man who is so enthusiastic a movie maker that he owns practically everything in the Filmo line and, when this picture was taken, was attending the photographic school at the University



MOVIE CAMERA LENSES

A guide to their selection and use

WHAT lenses shall I buy to deal with the conditions of light, distance, and subject matter most commonly encountered in taking personal movies at home and when traveling? What are the differences in results obtained with the various lenses offered? When should this lens be used rather than that one? The frequency with which such questions as these are asked prompts us to publish this explanation of the Filmo Camera lenses and their use.

As every owner knows, the Filmo Camera comes regularly equipped with a lens of 1-inch (25 mm.) focal length. This lens may have a maximum working aperture of F 1.5, F 1.8, or F 3.5, as the buyer selects, and in the case of the F 3.5 it may be in either a focusing mount or a fixed focus mount. But the 1-inch focal length is standard, and for a sound reason. That focal length was carefully chosen as being the most suitable for general, all-around use. Incidentally, since the ratio of focal length to size of film image is about the same in each case, the results of a 1-inch lens on 16 mm. film are comparable with those of a 2-inch lens, studio standard, on 35 mm. film.

A 1-inch lens is most suitable on 16 mm.

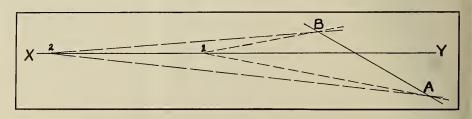
cameras because, on average scenes, it reproduces perspective most nearly as it appears to the eye. Actually, perspective is dependent not upon the focal length of the lens used but upon the distance of the camera from the subject. But, from a given distance, the area which will be included in the picture does depend directly, or rather inversely, upon the focal length of the lens. So by equipping the Filmo Camera with a 1-inch lens we make it necessary for the user, in order to include the desired area in his scene, to select the viewpoint which will give him a movie of pleasing perspective in the gencral run of scenes.

There are times when a perspective different from that gained with a 1-inch lens is desirable. Of course, as indicated above, practically any desired perspective effect may be gained with any lens by moving closer to or farther from the subject. But this restricts or enlarges, respectively, the area which will be pictured on the film, thus often making impractical this method of altering perspective. Therefore one sometimes requires a lens of different focal length, which can be used from a different distance while still including all of and no more than the desired subject area.

An experience in filming a fox hunt provided a good example of how a lens longer than the 1-inch is often useful in getting the desired perspective. The diagram below shows the path (AB) of the huntsmen. Since the riding was fast it was necessary to photograph from an oblique angle, indicated by the line XY. The riders were well strung out, and it was desired to show each as large as possible even at the point of entry into the field of the camera. Perspective, as we have said, is dependent upon distance from camera to subject. The farther away the camera was placed on the line XY the less was the difference in distance from the camera to points A and B and therefore the less was the difference in the sizes of the images secured of horses and riders at points A and B. In the diagram, the 1-inch lens covered the desired area AB from camera position 1, and the 2-inch lens covered the same area from camera position 2. With the 2-inch lens, a horse at A was about 3/4 the size of one at B, while with the 1-inch lens it would have been only about 1/2 the size of one at B.

Of course this difference in size could have been reduced further by using a still longer lens and taking up a more remote camera position. But if one goes too far in reducing perspective, subjects moving toward or away from the camera will seem, on the screen, to be in action without getting over the ground at the expected rate.

After considering this example, we can conclude that the lenses longer than 1 inch in focal length, generally speaking, are often very useful for filming races, parades, and any action that occurs over a considerable depth of area. The 2-inch



and 3-inch lenses are most commonly required for such purposes.

Aside from considerations of perspective, the longer lenses, which are called telephoto lenses, are valuable for their magnification or "hringing up close" of the subject. They are to the camera what a telescope is to the eye. Many movie subjects cannot be aproached closely enough to get a satisfactorily large image on the screen with the regular 1-inch lens. A few examples are passing ships at sea, athletic events and races, public events of many kinds, wild animals and birds, and camera-shy natives encountered on your travels. You can name numerous other examples out of your past experiences. From a given distance, the 2-inch lens will give twice as large a reproduction of a subject as the 1-inch, the 3-inch lens three times as large, and so on.

What telephoto lens to select depends on what you are most apt to want to do with it. Your decision can best be made by referring to the accompanying table of lens fields. The man who is planning a hunting trip will want to be prepared to get good-sized pictures of moose, or deer, or mountain goats, or whatever the game may be. Perhaps he expects to be able to approach to within 500 feet of the animals. At that distance, the table indicates, the 6-inch lens will take in an area 32 feet wide; the 4-inch an area 48 feet wide. His choice will be the 6-inch lens in this case, because his subject will not require more area at that distance than included in the field of the 6-inch lens.

Now let's consider the lenses of focal length less than 1 inch. In the home, on ship deck or aboard a yacht or cruiser, in narrow streets and even in mountain vallevs, there is often not room to get far enough from a movie subject to include all the required area in the field of the 1-inch lens. Here one of the shorter lenses will save the day, and make it unnecessary to resort to that overworked, inadequate remedy for such situations, panoraming or tilting the camera. Referring to the table of lens fields again, we see, for example, that at 15 feet the 15 mm. lens takes in an area 9.2 feet wide by 7.2 feet high. The field of the 1-inch lens at that distance is 5.9 by 4.3 feet. Though it would be impossible with the 1-inch lens at this distance, the 15 mm. lens would permit filming a full length scene of a group of people.

On account of its short focal length and the fact that it includes a large area from a short distance, the 15 mm. lens cannot he expected to give the pleasing perspective obtained with the 1-inch lens. It is a special purpose lens, invaluable in its particular function but not to be used beyond the indicated situations.

We have been discussing lenses only with regard to their focal length. The second important characteristic of a lens is its speed—that is, the amount of light it will admit. All Filmo Camera lenses are fitted with an iris diaphragm, the opening and closing of which is controlled by a rotatable collar. Marking in the familiar "F" system indicate the relative size of the aperture. We shall not explain the "F" system of lens markings here, other than to say that the smaller the "F" value the greater the size of the opening.

Lenses are described in terms of their focal length and their largest opening—i.e., 15 mm. F 2.5, 1-inch F 1.3, 1-inch F 3.5, 3-inch F 4, etc. Of course each lens can he closed down hy means of its iris diaphragm, when the maximum possible exposure is not required, to a series of openings smaller than the maximum one of F 1.3, F 3.5, or whatever it may be in the case of any particular lens.

for taking movie scenes indoors, where it is easier to assure correct exposure by employing a faster lens than by using a great amount of artificial light. The fast lenses are also useful for filming night scenes on brilliantly lighted streets, stage presentations, and outdoor scenes in very weak light, such as in deep woods. When cameras are speeded up for taking slow motion movies, the lens must be opened up to compensate for the decrease in the time the shutter is open, and here again a fast lens is often required.

The 1-inch F 1.3 lens is for black and white movies only, and offers the fastest working speed yet satisfactorily obtained in a movie camera lens. The 1-inch F 1.5 and F 1.8 lenses are both so constructed that the filter for taking natural color movies hy the Kodacolor process is instantly applicable. Of the two, the F 1.8 is slightly superior for Kodacolor, while the F 1.5 offers the advantage of a little more speed for black and white work. In choosing between the two, be guided by the type of movies in which you are most interested. Either lens will give excellent service, however, in either type of work. In a future article, we shall discuss how to use lenses to best advantage.

Lenses Focal	Distance From Camers (Feet)																											
Length	Plane	Angle	1	11/2	2	3	4	5	6	7	8	15	25	30	40	5	0	60	75	10	0 1	50	200	30	0	400	500	1000
15 m/m.	Horszontal	36"- 6"	.65	. 97	1.3	1.9	2 6	3.3	3.9	4.5	5.2	9.7	16.5	19.	26.	0 33	.0	39, 1	48.	65.	1 9	.6	130 2	195	3	260.4	330.	651.
	Vertical	27°- 6'	. 48	. 72	.96	1.4	1.9	2.4	2.9	3 4	3.8	7.2	12 (14.	19.	2 24	. 1	28.9	36.	48.	2 72	. 3	96 4	144	6	192.8	241.	482.
20 /	Horizontal	26°- 4'	.49	. 73	. 93	1.5	2.0	2 4	2.9	3.4	3.9	7.3	12.2	14	7 19	5 24	.4	29.3	36.	48.	9 7	. 3	97.8	146	7	195 6	244.	489.
20 m/m.	Vertical	19°-54'	. 36	.54	72	1 1	1.4	1.8	2 2	2 5	2.9	5 4	9.	10.	14	5 18	. 1	21.7	27.	36.	2 54	3	72.4	108	6	144 8	181	362.
24 - /-	Horizontal	21°-22'	39	. 59	.78	1.2	1.6	2.0	2.3	2 7	3,1	5.9	9.7	11.3	715.	6 19	. 5	23.5	29.	39.	1 58	. 7	78 2	117	. 3	156 5	195 6	391.2
25 m/m.	Vertical	16°- 9'	29	. 43	58	.87	1 2	1.4	1 7	2 0	2.3	4 3	7 2	8.	7 11.	6 14	. 5	17.4	21.	28	9 4	4	57.9	86	9	115 8	144 8	289 6
35 m/m.	Horizontal	15*-37*	. 28	. 42	. 56	.84	1.1	1.4	1.7	1.9	2.2	4 2	6.9	8 -	11.	2 13	. 9	16.8	20.	27.	9 4	.9	55 8	83	8	111.7	139.7	279 4
	Vertical	11"-41"	.21	.31	. 41	62	.83	1.0	1 2	1.4	1.6	3 1	5.1	6	8.	3 10	. 3	12.4	15.5	20.	7 31		41 3	62	. 1	82 7	103.4	206 8
2*	Horizontal	11"- 4"	. 19	. 29	.39	.59	. 78	. 98	1.2	1.4	1 6	2.9	4.6	5.	7.	8 9	.8	11.7	14.6	19.	5,29	.3	39.1	58	7	78.2	97.8	195.6
	Vertical	8°-14"	.14	22	29	.43	. 58	72	.87	1 0	1.1	2 2	3.6	4.	5.	8 7	. 2	8.7	10.8	14.	5.21	. 7	28 9	43	4	57.9	72.4	144 8
3.	Horizontal	7°-20'	. 13	.19	. 26	.38	.51	.64	. 77	. 90	1.0	1.9	3.2	3.6	5.	1 6	.4	7.7	9.6	12.	8 19	2	25.7	38	. 5	51.3	64.2	128.6
,	Vertical	5°-26'	.09	14	. 19	28	. 38	. 47	.57	66	.76	1.4	2.4	2 8	3.	8 4	7	5.7	7.	9.	5 14	2	19.0	28	. 5	38.0	47.6	95.0
334*	Horizontal	5°-52'	.10	. 15	. 21	.31	.41	.51	. 62	.72	. 82	1.5	2.6	3.1	4.	1 5	. 1	6.2	7.3	10.	3 15	. 4	20.5	30	.8	41.1	51 4	102.7
3 74	Vertical	4"-21"	.07	.11	.15	23	.30	. 38	.46	.51	.61	1.1	1.9	2.	3	0 3	8	4.6	5.7	7.	6 11	. 4	15.2	22	.8	30.4	38 0	76.0
4*	Horizontal	5" - 30"	.10	.14	. 19	. 29	. 38	.48	. 58	.67	.77	1.4	2.4	2.9	3	8 4	. 8	5.8	7.2	9	6 14	4,	19.2	28	.9	38.5	48	96.2
	Vertical	4"-5"	.07	11	.14	. 21	. 28	. 36	. 43	.50	. 57	1.1	in 8	2.	2	8 3	. 5	4.3	5.	7.	1 10	. 7	14 2	21	. 3	28 5	35.6	71.2
6"	Horizontal	3°-40*	.06	.09	13	. 19	. 26	. 32	.38	.45	.51	.96	16	1.9	2.	5 3	. 2	3 8	4.6	6	4 5	. 6	12 8	19	. 2	25.7	32.	64.1
	Vertical	2"-43"	05	07	09	14	19	24	. 28	.33	.38	.71	1.2	1 4	1	9 2	.4	2 8	3.5	4	7 7	1	9 5	14	2	19	23 7	47 5

Table of Filmo Camera lens field sizes at various distances

Because, as we have explained, 1 inch is the most generally useful focal length, the most widely useful lenses of large aperture are given this focal length. Three of these 1-inch large aperture lenses are included among the Cooke lenses for Filmo Cameras. Their maximum apertures are F 1.3, F 1.5, and F 1.8, respectively. These lenses, in the order named, are 7.25, 5.44, and 3.78 times as fast as the F 3.5 lens. That is, with one of these lenses on your Filmo you can get correctly exposed pictures with about 1/7, 1/5, or 1/4 as much light as would be required when using an F 3.5 lens.

The fast lenses, therefore, are invaluable

A. S. C. Prize Films Available

C. J. VER HALEN writes that the prize winning 16 mm, films in the 1932 American Cinematographer contest may be borrowed for local showings by clubs and responsible dealers. The available films are: "Tarzan, Jr.", first prize, 3 reels; "Lullabye", second prize, 1 reel: "I'd Be Delighted To", third prize, 1 reel. Information about open dates may be had by writing to Mr. VerHalen, c'o American Cinematographer, 6331 Hollywood Blvd., Hollywood, California, Incidentally, "Lullabye" will be shown at the Bell & Howell booth in "Hollywood" at the World's Fair.

IN PLANNING and taking this summer's vacation movie, keep in mind that it is human interest, the little things, which count. Plan your pictures in the light of being viewed by critical strangers rather than by sympathetic friends and relatives. Your picture must tell a story and be to the point.

For vacation movies, plan your continuity in terms of sequences rather than by the usual method of detailed scenes. This method gives an opportunity for taking advantage of the unanticipated interesting bits of action that you are bound to run across.

Movies of automobile trips can possibly be classified into two types, the short week-end trip and the longer vacation trip. Continuity for the short trip may necessarily call for a chronological treatment. Even so, you can put variety into that continuity by catching the simple human interest bits of action. Perhaps it might be of the young son taking leave of his kitty or other pets; perhaps Dad has to take his dog over to a neighbor's for leave during the trip; and I never did start out on an automobile trip but what something was forgotten, necessitating a return and a second start.

If you desire to take pictures through the windshield while the car is in motion, shoot at a speed of 32 frames per second and drive fast. The resultant effect will be floating bounces rather than abrupt jiggles. If you want hair raising effects, drive through heavy traffic and shoot at 8 speed.

I like to stop and get bits of action indicative of the life of the country passed through—perhaps a farmer plowing, or a scene of haying operations, or traffic at a busy street intersection, or a low shot of hurrying feet upon the sidewalk.

What has been said concerning the shorter trip will also be of value for the longer trip, except that you can treat the continuity in sequences. Such a picture was made of our last summer's motor trip through Wyoming and Idaho. One sequence was on dude ranch activities, another of fishing on Jackson Lake, one of the rodeo celebration, another on cattle



LA TOUR

FILMING YOUR VACATION

RALPH NEWCOMB

raising, one of trout farming, one of an Indian celebration, and so on. The ensemble made a most effective travelog of the summer's trip.

A good fishing picture is hard to get. Why? Because one is apt to become more interested in the actual fishing than in taking the picture. But some day, I swear, I am going to let my old fishing partner do the fishing while I merely look on and take movies. The opening touch for such a picture would be to catch that anticipation—those ritualistic preparations for the trip. What true fisherman is there who does not get out his book of trout flies, his jointed rod, his wooden minnows and other lure, to fondle and examine? Catch that anticipation!

An alarm clock, set at an unearthly hour, usually ushers in the big day. Next, a steaming cup of man-made java, then away to the chosen lake or stream. Get those smiles of anticipation, those jovial dispositions, while enroute. Excellent pictorial effect can be obtained on your opening long shot of the spot chosen for

fishing. If it is a lake, try to catch that spirit of early morning calmness—perhaps a little mist over the water, diffusing the distant shore line.

Now for the actual preparationsplacing the tackle in the boat, shoving off. Or, if a stream, the putting on of rubber boots or an old pair of wading shoes. Show the technique involved in your particular type of fishing. Catch that wild expression attending the first strike-the excitement of reeling him in. And look!-A close-up of the big beauty. Shoot a scene of weighing the big ones. Get the proud exhibition to friends at home, then a close-up of the sizzling frying pan, with a fade-out upon the family group at the table. Photoflood lights now make interior shots an easy matter.

You will find that a trip by pack train can make most interesting movie material. Wrangling the horses, the roping and saddling, might be a starter for such a picture. Get a close-up of a pack saddle and paniards. Have the head cowboy pack one horse which has determined objections. You will be assured of an exciting scene. (I remember one

hunting trip on which such a horse bucked through our campfire, tore down the cook tent, and ended up in a tangle of elk meat, torn canvas, and cowboy cuss words.) Show flashes of the various packing operations, the large amount of material that can be placed upon one horse, and end up with a close-up of the diamond hitch that binds the load securely together as well as to the horse.

If there is a man of excessive avoirdupois in the group, a touch of comedy may be obtained by getting the horse to look back at the heavy rider about to mount, then cut in a spoken title, "Oh! Oh!", or something to that effect.

On the trip you may want to shoot some scenes while mounted. In this manner you can get some mighty interesting action scenes of the pack train winding through the timber or around some narrow point. Take a horse that will stand still and not object to the buzzing of the camera.

You might have an occasional close-up of various members beginning to stand in

their stirrups to ease that growing discomfiture of saddle contact. Then the end of the day's trip, the tired riders stiffly dismounting, the loads being removed from the pack horses... and how those horses do roll and grunt with relief after the packs are removed.

You may want to film a rodeo on your trip this summer. If so, start in with scenes out along the highway of the people coming to town — dudes and dudeens buzzing by in their high-powered cars, ranchers with their families in cars of various models and vintage. Then some scenes of the town's activities-attendants at filling stations busily nozzling out the gas and wiping windshields, interesting characters loafing around the doorway of some pool hall, gatherings of people shaking hands, the maze of variegated traffic on the town's main street. Catch that string of dust leading out to the rodeo grounds, the jam at the entrance, the parked cars and confusion.

Such an introduction to your rodeo picture is as necessary for picture interest as are the exciting shots you will take of the wild horse races, bucking steers, and roping exhibitions. Break up the monotony of the usual rodeo scenes by occasional close-ups of an individual's expression in reaction to some unusual feat or surprising event. Get the antics of some comely girl and bashful male escort, or vice versa.

Select a position for taking your track shots so that good side lighting may be obtained. Slow motion and a four-inch lens make an ideal combination for catching a rider being thrown from some vicious horse.

It was my good fortune to catch some unusual action with such a combination at the Jackson Rodeo last summer. The rider I was filming suddenly lost his balance and lurched off to one side with a spurred boot caught in the saddle cinch. The horse dragged him along for some distance with head and shoulders all mixed up with horse's hoofs and dust. Then the rider's foot pulled free from his boot. The horse bucked on down to the end of the corral. The rider lay still for a moment, then limped off over toward the chutes to laughing and unsympathetic companions. The result on the screen was very exciting.

The New York Public Library would like to obtain a copy of the April-May, 1932, issue of *Filmo Topics*, now out of print. Send to Bell & Howell Company, please.

Visit "Hollywood-In-Chicago"

BE SURE to see "Hollywood-in-Chicago", at A Century of Progress Exposition. There you may see sound pictures being filmed and recorded, see movie stars in person, watch radio broadcasting, be entertained from an outdoor stage, lunch at a replica of Hollywood's famed Brown Derby restaurant, take movies before a variety of sets on outdoor lots.

Bell & Howell Company has a booth in the foyer of the northern of the two theaters in "Hollywood-in-Chicago." There you may see displayed and demonstrated a complete line of Filmo 16 mm. movie cameras, projectors, and accessories, including the newest B & H products. Films of the Fair will be shown, as well as some outstanding amateur productions.

Recording a Photoplay

HARVEY F. MORRIS

EDITOR'S NOTE: This is a sequel to the article by Mr. Morris which appeared in Spring Filmo Topics under the heading "Planning a Movie".

WHEN the plans for our photoplay are all carefully and thoroughly laid out, we turn to the actual filming. Some one person is definitely the Director. He may also operate the camera. Otherwise, he stands near it. He explains that "Action" means the actors are to start the action; that "Camera" means the actual filming is to start; and that "Cut" means the filming is to stop. And he cautions the caste never to look at the camera.

Then he outlines briefly the action, and asks them to try it. This is the first, experimental work-out. The actors are uncertain, stiff. They do not jibe with each other. After it is over, the Director tells what is good, and what needs changing. He asks them to go over it again. This time it is much better. After commenting encouragingly, he asks them to do it a third time. Still better. The actors now know what they are to do and what the others will do. They act with more selfconfidence, freedom, and naturalness. If the Director feels they are now good enough, he says, "All right. This time we will film it."

Some directors will not agree with this procedure, but in our group we have had best results from rehearsing a given scene and then taking it, rather than rehearsing the whole play several times, and then perhaps several days later filming it.

A thick book could be written on the art of directing. Here are just a few fundamentals: Try to *build up* each scene. The general view should in most cases precede the closer ones. The effort should be

made clear before the accomplishment, the mystery before the solution. Arouse interest and curiosity by suspense. For example, first show the hero stooping, his back to the camera, then rising, then turning around to show he has discovered the missing pearls—rather than show him at once with the pearls in his hand, with an otherwise superfluous title, "I've found them."

Develop the action as though there were to be no titles. Afterward, put in plenty. Emphasis and centering of attention are secured by moving the camera closer. Strive for variety in every scene through mingling long shots, medium shots, and close-ups.

Keep in mind that the audience will see only one thing at a time. Make sure they see the right thing. If an actor is about to do something important, direct attention to him by having the others look at him before he starts. Then have him do it—clearly, and not too fast. Remember, action seems to go faster on the screen than in the acting. Each point must be obvious—not too quick nor too subtle.

While you are taking, take plenty. In editing, it is easy to condense, but impossible to expand. And, finally, be always on the lookout for the unexpected, last minute inspiration. That is one of the thrills of movie making.

The actual filming is over so quickly that it belooves one to enjoy to the fullest the preparation: the discussions, the writing and revising of the Working Scenario, and the selection of costumes, properties, and locations. Thorough, leisurely planning adds to the joy and success of making a movie that you and your friends will want to see over and over again.

Movies at the World's Fair

(Continued from page two)

cotton with modern farm machinery, and the uses of McCormick-Deering Tractors and of International Motor Trucks. Interesting historical matter is included.

Kerr Glass Mfg. Co., also in the Agricultural building, explains the home canning of foods with a Filmo-projected motion picture.

Libby, McNeill & Libby, in its display in the Agricultural building, is showing two films describing sources of foodstuffs and their packing and uses. Two Filmo Projectors are being used, and an off-stage voice supplements the pictures.

Minnesota has devoted a generous portion of its hall in the Court of States to a theater in which two B & H Filmosounds present talkies showing the agricultural, recreational, and industrial advantages of the state.

New York State, in the Court of States, is showing eight 16 mm. motion pictures of the various aspects of the state, using four Filmo Continuous Projectors. This state hall is distinguished by its extensive use of fine photographs.

Ohio, wishing to stress its important position industrially, is showing a number of motion pictures, each dealing with one industry and each complete in one reel. About half of these films are in Kodacolor, and these are alternated with the monochrome films, two Filmo JL Projectors being used. Ohio's hall is in the Court of States.

Packard Motor Car Co., at the north end of the Travel & Transport building, is using two Filmo Continuous Projectors to show films describing the manufacture and the proving ground testing of Packards.

Union Carbide Co., in its extensive display in the Hall of Science, leads all World's Fair exhibitors in the number of motion picture showings being presented simultaneously. Two B & H Filmosounds tell the story of steel alloys and their uses. A third Filmosound presents a talkie devoted to storage batteries. In addition, there are four silent Filmo Projectors. Two project pictures at the welding pit, a spectacular feature of the exhibit. Two others show the various uses of Boy Scout and Girl Scout flashlights; these are built into giant reproductions of the two flashlights. All seven B & H Projectors are equipped with continuous attachments, some of 150-foot capacity, others of 400-foot capacity.

U. S. Dept. of Agriculture. The varied and extensive activities of this department are presented in a clear, concise manner by a well prepared film shown in an informative booth in the Federal building. The projector is a Filmo Continuous.

U. S. Dept. of Interior, National Park Service, also in the Federal building, has a display

which presents the National Parks as very tempting vacation spots indeed. A Filmo Continuous Projector is used to show scenic pictures from the various parks and monuments.

U. S. Navy, in an exhibit in the Federal building, is employing two Filmo Continuous Projectors to show highly interesting pictures of the Navy in action on the seas.

University of Chicago, on the south ramp in the Hall of Science, is showing films dealing with the treatments given to crippled children. A Filmo JL Projector is being used.

Missing Equipment

Filmo 70 Cameras

No. 6,603. Austin A. Clement, 209 Lake Shore Drive, Chicago.

No. 7,809. Arthur Rosenzweig, 33 W. 42nd St., New York City.

No. 12 331, 3-speed. Dennis A. Horan, 2325 Marshall Bldv., Chicago.

No. 24,586. M. Trant, c/o Carson Pirie Scott & Co., Chicago.

No. 45,597. J. G. Woerner, 6485 Wydown, St. Louis, Mo.

No. 50,224. Armand Muller, 466 Cangallo St., Buenos Aires.

No. 51,083, with F 3.5 UF Lens No. 178,230, 1" Dallmeyer F .99 Lens No. 135,498, and Cooke F 5.5 Lens No. 198,958. Harris Structural Steel Co., 419 Fourth Ave., New York City.

No. 51,085. Miss Lillian C. Olsen, 50 Roosevelt Ave., Malverne, L. I., N. Y.

No. 57,118. E. R. Squibb & Sons, 745 Fifth Ave., New York City.

No. 62,097, 70-D. Dr. Cole B. Gibson, Undercliff, Meridian, Conn.

No. 62,285, 70-DA. University of South Dakota, Vermillion, South Dakota.

No. 62,303, 70-D, with Cooke lenses: 1" F 1.8
No. 192,049, 2" F 3.5 lens No. 155640, 4"
F 4.5 No. 206,859. Philip B. Stewart, El Ecanto, Santa Barbara, Calif.

No. 149,889. L. Shirley Tark, 422 Briar Place, Chicago,

Nos. 150,527 and 150,529. Bass Camera Company, Chicago.

Filmo 75 Camera

No. 48838. Hale Nelson, Southwestern Bell Telephone Co., 1010 Pine St., St. Louis, Mo.

Filmo Projectors

No. 5,200. American Agency of French Vichy, 503 Fifth Ave., New York City.

No. 16,365. D. H. Hunt, New York Studios, 328 W. 39th St., New York City.

No. 24,090. M. Trant, c/o Carson Pirie Scott & Co., Chicago.

No. 25,940. Bradner Smith Co., 333 S. Desplaines St., Chicago.

No. 40,318. Gordon L. Harris, 2035 S. Racine Ave., Chicago.

No. 49,275. Roy Bain, 901 Chamber of Commerce Bldg., Indianapolis, Ind.

No. 54,674. Bass Camera Company, Chicago.

Questions and • Answers •

Conducted by

R. FAWN MITCHELL

Summer Film Care

Q. Do films require humidifying in summer? A. While it is very important to the safeguarding of your movie films to keep the humidifying pads in your film containers moist in winter, the practice of moistening these pads should be discontinued for the summer, resuming it about October 1. Summer air is moist enough for stored film, and additional humidifying may lead to ruinous mold and mildew.

Thick Splices

Q. My splices seem quite thick. What is the cause and the remedy?

A. Most probably an excessive amount of cement was used in making the splices. It is essential that an absolute minimum of cement be applied. It is, of course, necessary to scrape the emulsion off the film. If you happen to be splicing originals and duplicates together, it is possible to splice the celluloid sides together without scraping. We suggest, however, that the films be scraped a little to make normal the thickness of the splice.

Title Writer

Q. Is it possible to install the new style arms and lamps on the old style B & H Title Writer?

A. Unfortunately, no, because in order to install the new style arms, we have to remove the two cross supports from the wood base. This results in a distinct chance of the base board warping.

Large Screens

Q. Is it possible to get B & H Extra-Bright Screens in larger sizes than listed?

A. Such screens can be obtained on special order, in sizes up to 5 by 7 feet.

Saddle Trips

Q. How can the Filmo Camera be carried on horseback for convenient use?

A. The Filmo 75 Camera is considered the most convenient to carry on a saddle trip, because of its small size and flatness. It fits into the usual saddlebag, where it is easily reached.

Several naturalists have carried Filmo 70s and even Eyemo Cameras on horseback, using special cases. We are not in a position to furnish such cases, but suggest that they be made in the form of an inverted "V", with the camera in one compartment and the film and accessories in the other, the whole being slung over the horse's shoulders just in front of or at the back of the saddle.

The use of the Eyemo carrying handle on the Filmo will be found very convenient on such trips. It provides a little more certain grip for a camera of the Filmo 70 type.

FILMO R PROJECTOR

New . . Improved . . . More Powerful . . .

LET this new Filmo Projector speak for itself. Choose any familiar 16 mm. film. Ask your Filmo dealer to project it on the new Filmo R Projector. We believe that you'll see your film sparkling in

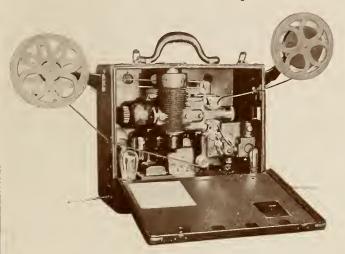


a new and unsuspected brilliance and clarity . . . see your film, perhaps for the first time, as it really is.

The Model R doesn't stop with giving new quality to your pictures. It offers new operating conveniences, too. A power rewind eliminates hand rewinding of films. An improved cooling system increases the 500-watt lamp's efficiency and prolongs its life. There is a manual framing device for out of frame prints. A most convenient carrying case is included at \$195. Without power rewind, clutch, reverse, and case, \$145.

B&H FILMOSOUND

16 mm. Sound-on-Film Reproducer



THIS new talkie reproducer meets every requirement for non-theatrical presentation of sound films. Both tone and picture are of the highest quality. Sound volume, as well as picture size and brilliancy, can be regulated to serve in a small room or in an auditorium seating 1,000 and more. Complete with speaker in two compact cases, with a total weight of only 60 pounds. Details on request.

B & H PHOTOMETER

for selective exposure readings



WITH the Photometer, exposure readings are taken while sighting through the eyepiece at the important part of the subject. You turn a dial to dim a filament image to match the subject's brilliance, then read the correct lens diaphragm setting directly from

the dial. Accurate under any light. Price, \$15.00. With case, \$17.50.

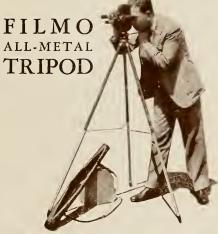
For "Still" Cameras: Photometer Model B is fully calibrated for use with still cameras. Same prices as above.



NEW! A WESTON EXPOSURE METER

calibrated especially for Filmo Cameras

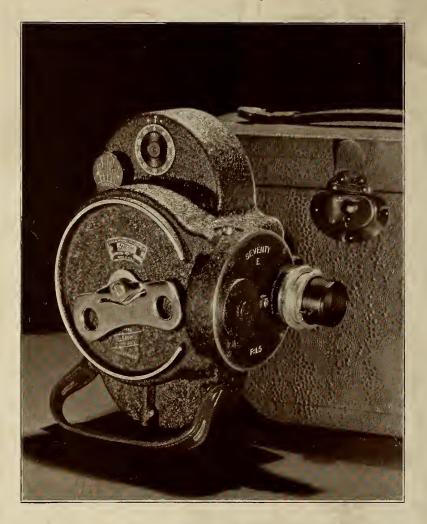
THIS new Weston Cine Exposure Meter is especially calibrated for the Filmo Camera shutter speeds. It is entirely automatic—the human element is eliminated. A photo-electric cell gauges the light. There are no batteries. Gives correct average exposure readings—direct from the dial for normal camera speed—for the subject as a whole. Favored especially where eyesight deficiencies make difficult the use of a selective meter. Price, \$22.50 in the U. S.



A TRIPOD should always be used for telephoto lens shots, and for the best results in any shot. The Filmo All-Metal Tripod is light, compact, rigid, and durable. It provides for smooth, even panoraming and tilting. Each movement can be locked when the other only is desired. Leg chains prevent accidental upsetting. A spirit level aids correct setting up. Rubber leg tips fit over spurs for smooth, hard surfaces. Moving parts are dust and grit proof. Price, \$36. Leather case, \$12.50.

BELL & HOWELL COMPANY, 1801 Larchmont Ave., Chicago; New York; Hollywood; London

New FILMO 70-E—A moderately priced all-purpose movie camera



Filmo 70-E Camera, with Cooke 1-inch F 1.5 lens, four film speeds, and carrying case, \$185. Your signature engraved on camera door, free.

Same, except with Cooke 1-inch F 3.5 universal focus lens, \$150.

Other Filmo Cameras, \$92 and up. Filmo Projectors, \$135 and up. Bell & Howell pays the Federal tax on all Filmos

Right—Filmo 70-D—Master of all personal movie cameras. Three-lens turret head, seven film speeds, variable area viewfinder. Critical focuser optional. Price, \$251 and up, including Sesameelocked Mayfair case



F 1.5 lens and 216° shutter give it 650% of the speed of ordinary F 3.5 cameras. Four film speeds add to its versatility. The smart new finish is distinctive. The Bell & Howell name plate assures quality.

THE new Filmo 70-E 16 mm. personal movie camera, though moderately priced, will do superbly the things most amateurs commonly want a camera to do.

Its fine, fast Cooke 1-inch F 1.5 lens, aided by the 216° shutter opening, permits taking pictures indoors with a minimum of light, or outdoors at super speed even in poor light. The F 1.5 lens is fine for Kodacolor, too. And of course it is instantly interchangeable with other special purpose lenses.

Four film speeds, half (8), normal (16), sound (24), and super (64) speed, controlled by a precisely accurate governor, give useful versatility. Half speed snaps up sluggish action, gives double the exposure when the light is very weak. Sound speed is for films to be synchronized with sound, and for pams and scenes from moving automobiles or trains. Super speed gives beautiful slow-motion action studies.

Above all, Filmo 70-E is a Bell & Howell product, a finest quality camera of time-tried basic design, one which can be depended upon to reflect its fineness in the perfection of its pictures.

Your Signature Engraved Free

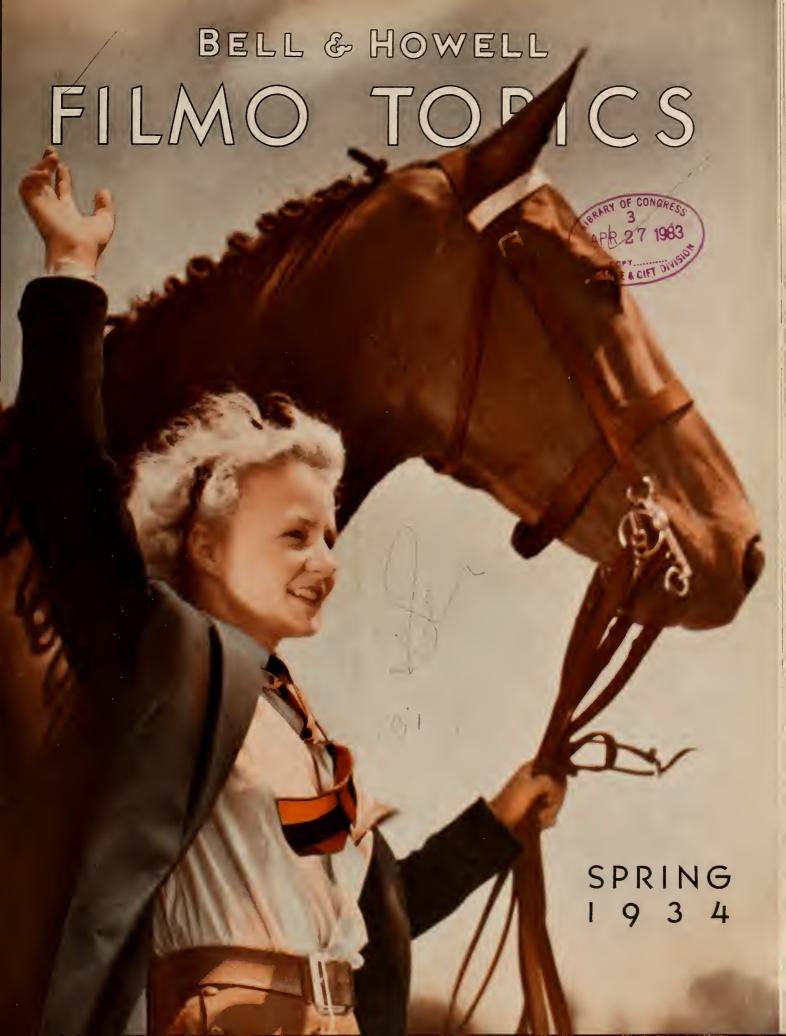
Send the door of your new Filmo 70-E Camera to Bell & Howell, Chicago, and also your signature (not more than $2\frac{1}{2}$ inches long and 1 inch high) on a slip of paper. We'll engrave your signature permanently into the metal.

BELL & HOWELL

Bell & Howell Co., 1842 Larchmont Ave., Chicago, Ill. (New York, Hollywood, London [B & H Co., Ltd.] Est. 1907)

FILMO

PROFESSIONAL RESULTS WITH AMATEUR EASE



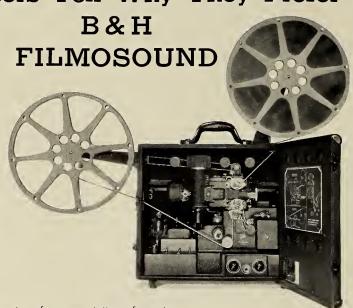
Now you can RENT 16mm. TALKIES!

Bell & Howell Filmosound Rental Library, through conveniently located branches, offers fine 16 mm. sound-on-film subjects for home, club, church, school, and other non-theatrical showings

 ${
m Y}^{
m OU}$ can now rent the finest 16 mm. sound films for non-theatrical showings. And, if you do not have a 16 mm. sound-on-film projector and a screen of adequate size, this equipment can also be rented, with or without an operator, at reasonable rates. Thus you may present a complete talkie program in your home, school, church, club, lodge, or elsewhere.

Filmosound Rental Library talkies are rented at moderate rates-most of them at \$1.50 per reel. They are not for sale, and are available exclusively through this library. The first releases are listed at the right, as are the Library branches. Future weekly releases will include new, exclusive sound film versions of successful lectures on travel. exploration, adventure, nature study, etc.

Users Tell Why They Prefer the



THE director of an association of music $oldsymbol{\perp}$ lovers praised the tone quality with which the Filmosound presented piano and violin music (notoriously difficult to reproduce with pleasing fidelity).

The advertising director for a manufacturer of one of the finest automobiles wrote: "From actual experience we know that the B&H Filmosound is by far the most economical in the long run. . . . Moreover, there is no comparison whatever between the quality of reproduction. . . ."

Another motor car manufacturer found

his Filmosounds so simple to operate that they could be shipped from distributor to distributor and run successfully by totally inexperienced operators.

Other users speak in glowing terms of the perfect, constantly dependable service given by their Filmosounds, and of the large audiences handled due to adequate picture illumination and ample sound volume.

Write for complete information about this superior 16 mm. sound-on-film reproducer.

BELL & HOWELL COMPANY

1842 Larchmont Ave., Chicago NEW YORK HOLLYWOOD LONDON (B&H CO., Ltd.)

(Established 1907)

CURRENT RELEASES

Rental rate — \$1.50 per reel

One-Reel Scenic Travelogs

The Wonder Trail. Beauty spots in western U.S. mountains.

The Veldt. African wild life. Highlights of Travel. Unconven-

tional travel pictures from Czecho-Slovakia, Warsaw, Vollendam, Nice, and Mexico.

Jungle Giants. Giraffe, crocodile, hippopotami, lion, zebras, elephant, and other African animals at home.

One-Reel Comedies

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For the Love of Fanny. Hilarious situations in a fraternity initiation. Tamale Vendor. Two young American vagabonds have trouble at a Mexican hacienda.

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How the mice play at night.

Jingle Bells. Comic opera in cartoon style.

Radio Girl. A laugh-packed burlesque on radio broadcasting.

Noah's Outing. Cartoon version of the cruise of the Ark.

Ye Olde Songs. Old time favorites combined with the frivolous fun of cartoon movies.

The Black Spider. Proving that crime does not pay.

Peg Leg Pete. Adventure on a pirate

FILMOSOUND RENTAL LIBRARY BRANCHES

New York City-Willoughbys, 110 W. 32nd St.

Providence, R.I.—Westcott, Slade & Balcom, 95 Empire St.

Wilmington, Del.—Butler's, Inc.,

415 Market St. Baltimore, Md.—Zepp Photo Sup-

ply Co., 3044 Greenmount Ave. Philadelphia—Williams, Brown & Earle, 918 Chestnut St.

Chicago—Almer Coe & Comany, 105 N. Wabash Ave.

SanFrancisco-Schwabacher-Frey & Co., 735 Market St.

Hollywood, Calif.—Bell & Howell Company, 716 N. LaBrea Ave. Other branches to be established.

Ask the nearest branch to send you the Filmosound Library release bulletins.

BELL & HOWELL

FILMO TOPICS

Published in the interests of personal motion picture makers and users by the Bell & Howell Company, Chicago

EDWIN A. REEVE - Editor

VOLUME 10

SPRING 1934

NUMBER I



A HOBBY THAT PAID

S. A. Campbell, Lecturer, Author, and Conservationist, finds both financial and spiritual rewards in 16 mm. movie making

S. A. CAMPBELL has been an enthusiast over 16 mm. motion pictures for some years. His work as a naturalist and a preserver of the wildwood led him to make pictorial records of the animal and plant life of the northern forests. But the pictures he took were primarily planned for his own private use. It probably never entered his thought that these films would become the means of financial returns, and of aiding him materially in conservation work.

"I found, one day," he declared in discussing his work, "that I had a hobby which paid, in every sense of that word.

"I believe I see the northern forests in a little different light from many. I see in them more than mere fields of sport and areas for healthful play, however important are these functions. The forests possess a spiritual significance in the scheme of life. Hunting, fishing, vacationing, adventure, rest, are but component parts-a means to an end-but the influence of the forest as a whole is to inspire man with courage, faith, hope, and worthy ambition. This ennobling influence springs from a subtle quality in the wildwood, a soft blending of the magnitude, antiquity, beauty, and solitude of these sacred environs.



S. A. Campbell

"It was to record this atmosphere that I first turned to the motion picture camera. Still pictures did not accomplish the desired end. They could not turn rapidly enough to the many elements of the forest. I needed scenes of sunsets and dawns, fading into dimly lit forest chambers peopled with shy wilderness creatures. I needed the motion of the leaves in the evening breeze, birds fluttering from tree to tree, deer drinking in the shallows, beavers working at their miraculous dams. I needed

to link the vast outdoors with cabin happiness, to depict the friendly circle about a glowing fire, and to produce, by harmonizing scenes, an effect on the mind akin to that made by Nature. I wanted not only to record specific animals, scenes, and places, but also to get into the films an atmosphere of peace and tranquility, so vital to our race at this time."

Mr. Campbell succeeded better than he anticipated. He showed his films to his friends. Soon these groups became too large for homes, and public halls were necessary. Clubs, lodges, and associations began calling for his program. To do justice to constantly increasing audiences, he procured a 750-watt Bell & Howell Filmo Projector and a Da-Lite Screen.

Representatives of the Chicago & North Western Railway heard him lecture and saw his films. They recognized that he had captured in his pictures and his philosophy an element of the North Country which had escaped others. He was called to their offices, and an arrangement was concluded which filled his winter time completely with worth while lectures sponsored by this railroad. In three months time he delivered over one hundred lectures before some of the most important groups in the mid-west. The

Department of Conservation, Madison, Wisconsin, asked permission to copy some of his films.

"My films nearly ran away with me, leading me at a bewildering pace to new work and opportunity," declares Mr. Campbell. "Particularly have I been gratified with the practical aid all this has given to my fundamental object: Conservation! I have been able to bring home a lesson through pictures which I could

man is the beauty he sees.' Seeing beauty is a faculty susceptible of development. It may be cultivated, strengthened, improved, just as may any other mental accomplishment. Think how much richer is the life of one having beauty consciousness! It is my conviction that the camera is the greatest aid to this important development. With camera in hand, one is searching for beauty. He looks at everything about him, not to possess or consume it, but to discover its beauty and

improving our kind. 'Seek, and ye shall Mr. Campbell spends much of his time in his northwoods retreat, the Sanctuary of Wegimind, in the Argonne National Forest, Three Lakes, Wisconsin. This is a game sanctuary, where the forests and forest creatures are left undisturbed. There he completed his two recently published books, "Sanctuary Letters" "The Conquest of Grief."

As soon as his present series of lectures is completed, he will return to the north to do some additional writing. "My 16 mm. motion picture camera will go with me," he declares, "for I accept it as a divine commission to continue gathering the peace and beauty of those forests, and bring back this treasury to those who cannot otherwise reach it."

record it. To desire beauty so earnestly

is to uncover it everywhere, enriching our

own lives, and contributing definitely to

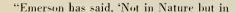
PERHAPS, this past winter, you heard Julien Bryan's widely presented lecture and saw his excellent motion picture, "Russia As It Is." If so, you may be interested in knowing that all these movies were made by Mr. Bryan with a B & H Eyemo Camera, a machine very similar to the familiar Filmo 70 Camera except that it takes 35 mm. film.



"... forest chambers peopled with shy wilderness creatures . . ."

never register in words. Animals and trees seen have much more significance than those merely described, and I have been able to awaken support of needed conservation measures in groups where, without motion pictures, argument was useless.'

He believes photography to be the greatest possible aid in awakening consciousness of beauty. "We should understand that beauty is not the property of an object, but the property of consciousness," he writes in a nature article. "The variety of opinions about any one thing will illustrate this. Once in company with a timber cruiser I came upon a wonderful White Pine, standing deep in the forest. 'What a beauty,' I exclaimed, thrilled at the sight. 'Yes,' my companion answered, 'at least 5,000 board feet.' We were looking at the same tree, yet to me it presented great beauty; to him, merely utility.





". . . the friendly circle about a glowing fire."



Paul Muni, film star of "I Am a Fugitive" fame, taking a close-up of his wife in their London hotel while on a recent vacation trip. Mr. Muni's camera is a Filmo 75 Right-J. P. Morgan on deck with his Filmo as his yacht passed through a Panama Canal lock

FILMO NEWS PICTORIAL ...





U. S. Ambassador W. C. Bullitt meeting U. S. S. R. President Kalinin at the Kremlin in Museaw. Behind President Kalinin are Messrs. Krestinsky and Litvinov, while Mr. Yenukidze stands helind Mr. Bullitt. In the foreground is N. A. Vikhireff, cameraman for Moscow Newsreel, who filmed the meeting with his **Bell & Howell Eyema**

Distinguished patrons examining the Filmo R 750-watt Projector, after its use in showing the Institute of Amateur Cinematographers 1933 prizewinning films at Bristol, England, Left ta right—the Lard Mayor of London; Wui. E. Chadwick, General Secretary of the LA.C.; the Lady Mayoress. The Institute has announced its 1934 international amateur movie contest. in which trophies and equipment prizes are offered. The contest closes on September 30, 1934. Entry forms and full details may be had on request to the Institute headquarters at 7, Red Lion Square, London W.C.I. England

MORE ABOUT DEPTH OF FOCUS

M. D. COOPER

DANGERS and uncertainties are the prime cause of the thrills of life. We all like our thrills, especially in retrospect, and amateur cinematographers are no different from the general run of humanity in this respect. However, any personal movie operator will welcome the chance to forego those thrills that arise from some of the uncertainties of movie shooting—uncertainties of exposure, proper focus,

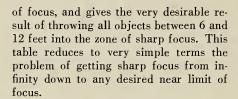
The article in the Christmas, 1933, number of Filmo Topics, dealing with depth of focus, hyperfocal distances, etc., is very interesting and informative. The accompanying table (Figure 1), derived from data there given for a 25 mm. lens, shows the proper focal setting and the largest lens opening which will give sharp focus from infinity down to any particular distance as the near limit of the field. For example, with the 25 mm. F 3.5 lens wide open, and with the focus set at 12 feet, sharp focus will be obtained on all objects more than 6 feet from the lens.

At F 3.5, with the focus set at infinity, the near limit of sharp focus is 12 feet. Decreasing the focal setting from infinity to 12 feet does not throw the far objects out

1			
ı	Near Limit of	Set	
	Sharp Focus	Focus for	Stop
	1'	2'	F 20
N.	1.5'	3′	F 13
	2'	4'	F 10
	3′	6'	F 6.7
	4'	8′	F 5
	5′	10'	F 4
	6'	12'	F 3.3
	8′	16'	F 2.5
	10'	20'	F 2
×	15'	30′	F 1.3

Figure 1. Table of 25 mm. (1 ineh) lens focal settings and largest possible stops for getting sharp focus from infinity down to the near limits indicated in the first column

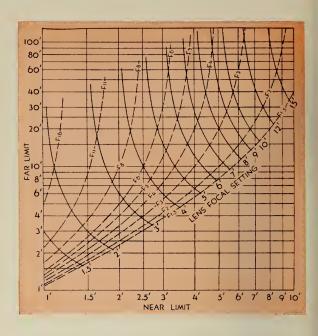
Figure 2. Chart (for any 25 mm. lens) for quiek determining of any two of the following: (1) Near Limit of sharp foeus, (2) Far Limit of sharp foeus, (3) Foeal Setting of the lens, (4) Lens Opening, when the other two are known



The formulas for the depth of focus, given in the article above referred to, make it possible to draw up a chart with which we can readily solve the general problem of securing sharp focus over any desired range of distance. This chart, Figure 2, is made up for lenses of 25 mm. focal length, but, as will later be shown, it can also be used for lenses of other focal lengths.

The use of the chart can best be shown by illustrative problems. Suppose we have the problem of getting a sharply focused picture over the range from 4 feet to 20 feet. The diagram gives the solution, in this manner. Follow up the vertical line for a "Near Limit" of 4 feet till it intersects the horizontal line for a "Far Limit" of 20 feet. This intersection lies on the dotted line for a lens opening of F 4, and about half way between the full linc curves for focal distances of 6 and 7 feet. The answer to the problem is therefore a focal setting of about $6\frac{1}{2}$ feet and a stop of F 4.

Take another problem. Suppose we wish to get sharp focus on an interior shot between the limits of 3 and 10 feet. We find the intersection of the lines for these two limits indicates a focal setting of 4% feet



and a stop of F 4.5. If, perchance, we have determined that we must open the lens up to F 2 to get full exposure, we cannot solve the problem in terms of focal setting and lens opening alone. If we can increase either the lighting or the speed of our film by 4 or 5 to 1 (or both of them by 2 to 1), or if we can decrease the camera speed to a fourth or a fifth, we can stop down to F 4.5 and get the desired depth of focus. Or we may find a solution in a lens of shorter focal length.

If none of these expedients is available, we must sacrifice some of our depth of focus. The line for a "Near Limit" of 3 feet cuts the F 2 curve at a "Far Limit" of about 41/2 feet. Probably it is not possible to work within the limits of 3 and 4½ feet. The line for a "Far Limit" of 10 feet cuts the F 2 curve at a "Near Limit" of 5 feet. Our problem is solved, therefore, if we can compress our subjects or action within the range of 5 to 10 feet. Maybe that is not quite enough range, so let us follow the F 2 line up a little farther —and find that we can cover the range from 6 to 15 feet, or from 7 to 23 feet, or from 8 to 40 feet, etc. If still we do not have a solution, it's too bad-we tried hard, anyhow.

The chart is compiled for a lens of 25 mm. focal length, but it can be used for a lens of any other focal length if the actual distances and focal setting are multiplied by the proper factor (see Figure 3) to convert them into "chart" distances and "chart" focal setting. The lens opening requires no correction—it is the same for

all focal lengths. For example:—Focal length of lens is 4 inches. Sharp focus is desired between 50 and 100 fect. The factor is 1/16, giving "chart" distances of about 3 and 6 feet. For these distances the chart shows a stop of F 3.5 and a focal setting of 4 feet. Applying the factor, in the reverse direction, we get an actual focal setting of 4÷1/16, or 64 feet, which, with a 4 inch lens, opened up to F 3.5, will give sharp focus between 50 and 100 feet.

Let us now investigate how much help a shorter focus lens would be in the foregoing problem which so sorely taxed our resources and ingenuity. Our limits of 3 and 10 feet, multiplied by the factor for the 20 mm. lens (1.56) give us "chart" limits of 4.7 and 15.6 feet. Using these limits on the chart, we see that we would still have to stop down to F 3 to get defini-

Focal	Multiply
Length	Actual Dis-
of Lens	tances by
15 mm	2.78
20 mm	1.56
25 mm	1.
35 mm	0.51
2 in	1/4
3 in	
33/4 in	
4 in	
6 in	

Figure 3. Table of factors for converting the chart distances and chart focal settings to use the chart for lenses of focal lengths other than 25 mm.

tion over the desired range. Following the line for a far limit of 15.6 fcet over to the F 2 line we read 6.1 as the "chart" near limit (and 8.8 as the "chart" focal setting). Applying the factor (reversed) we have an actual near limit of 3.9 feet (and focal setting of 5.6 feet). Doubtless we could squeeze the desired action within limits of 4 to 10 feet in place of the originally stipulated 3 to 10 feet, and thus be able to take our scene with a 20 mm. lens.

If we merely wish to find the limits of sharp focus for any given setting of a lens, we have only to find the point on the chart corresponding to the given stop and focal setting and read the near and far limits from the scales of the chart. Example: for a 25 mm. lens, stop F 6, set at 4 foot focus; the limits are 2.5 and 10 feet. Changing the focal setting to 5 feet



How Hollywood Uses Wide Angle Lenses..

..and how the amateur can effectively do likewise

R. FAWN MITCHELL

HOLLYWOOD'S cameramen are making extensive use of wide angle lenses, and the amatcur can well afford to follow their good example.

In addition to the obvious use of wide angle lenses for taking in more area from a given viewpoint, these lenses are employed to gain a greater depth of field (generally miscalled depth of focus), and to exaggerate perspective.

Large Areas

Most amateurs, like the professionals, often need to cover a considerable area from a relatively close camera position. Examples applicable especially to the amateur are: groups of people indoors, street scenes in old-world towns, ship-deck scenes, views from mountain valleys. Such problems can be solved only with a wide angle lens, because panoraming the subject with the regular lens is anything but good technique.

Depth of Field

As pointed out in the foregoing article, the shorter the focal length of the lens (at a given lens stop, as determined by the available light and the film emulsion speed), the greater the depth of the field that will be in focus. In this connection it will be interesting to review the articles on lenses in the Summer and Christmas

changes the limits to 2.8 and 20 feet.

In brief, the chart shows the interrelations between the four variables:—

- 1. Near Limit of sharp focus
- 2. Far Limit of sharp focus
- 3. Focal Setting of lens
- 4. Lens Opening.

Any two of these may be chosen at will (if within reason) and the other two determined from the chart. 1933 issues of *Filmo Topics*, particularly the latter one, in which the determining of depth of field was clearly explained.

When the professional wants sharp focus on subjects both in the foreground and at some distance, he selects a lens of sufficiently wide angle to give the required depth of field at the diaphragm stop which he must use. And when the amateur is confronted with a similar problem, he should also have recourse to a wide angle lens. In fact, in indoor work he is apt to have more need for such a lens for depth of field purposes than the professional, because his lighting equipment is usually less extensive.

Perspective

The professional employs wide angle lenses on occasions to get distorted perspective for various purposes. Perhaps he must make a limited number of extras appear to be a large crowd. With a wide angle lens the apparent size of those behind the principals is progressively smaller, and the effect is of a crowd extending far back. Perhaps a face in closeup must be made to appear grotesque. An extremely wide angle lens will make the eyes and cheekbones appear unnaturally wide-spaced, and the forehead higher and more receding than normal. In almost every professional film of a bizzare nature you will see close-ups made this way. They will often be given an even more frightful appearance by innaturally low-placed lighting.

The amateur can duplicate all these professional tricks with his Filmo, for an excellent wide-angle lens—the Cooke 15 nm. F 2.5—is available. It takes in an area 40% wider and 40% higher than the regular 1-inch lens, having a horizontal angle of 36° and a vertical angle of 27°. Its fast speed, too, recommends it for indoor work.

ONE HUNDRED MOVIE CRITICS

Condensed from the "Junior Red Cross Journal"

PHYLLIS JACKSON



Central High School Photoplay Club filming a Chinese Play. The eamera is a Filmo

IN THE paved open court in front of Central High School in Newark, New Jersey, dozens of girls in gymnasium costumes were drilling in the sunlight. On an elevated platform close by a student focused his movie camera on the group. With a downward swoop of a white handkerchief he signaled to his assistant who stood near the girls with megaphone in hand. "Ready?" the assistant boomed to the group. At their nod he shouted-"Camera!" The boy on the platform shot the scene and from time to time leaped down from the platform and took closeups. As the drill finished, all the girls rushed into the open plaza; the boy with the camera took a long shot of all the students and spectators.

This scene is not a novel one in the Central High School. Moving pictures of current school events are taken every week, made into a newsreel, and shown from time to time in the large auditorium to all the students. The newsreel is only one of the many activities that have sprung from the Central High School Photoplay Club, whose one hundred members make, edit, title, and project their own movies, study and criticize professional pictures, and engage in all the ramifications of the art of motion pictures.

The Photoplay Club, one of the most

Right—Central High students about to view one of their own films, using a Filmo J Projector

popular of extra-curricular activities, came about through student demand. About five years ago, Mr. William Lewin, an English instructor, seated in his classroom after school hours, was wondering how he could stimulate interest in the English course. A knock came on his door. A boy entered. In a rather hesitating manner he said, "Mr. Lewin, I have to write a report on 'Ben Hur.' I've never read the book but last week I saw

a picture based on it and I liked it. I wonder if I could get permission to write a report on the picture?" Mr. Lewin thought a minute and replied: "If you will promise me to read the book and compare it with the picture and report in your paper whether the picture has told the story faithfully and preserved its beauty—and if it has, how it was done—yes!" The boy went to work and became so interested that he discussed his essay with his classmates. As a result, Mr. Lewin was approached by many other students who wanted to do the same. Out of this germ of an idea the Photoplay Club was born.

The club was formed in the manner of any club. It was to be absolutely self-governing, the teacher to act only in the capacity of an adviser. To remain in good standing, members had to turn in a report and

criticism of specially selected moving picture textbooks on all phases of picture making. Meetings were to be held daily and outside of curriculum hours.

The club was attended enthusiastically and the membership mounted. Gradually students learned how to pick good photographic subjects. Instead of selecting a monotonous line-up of students at a picnic or stodgy, posed isolated groups that had no general interest in school life, they chose subjects that would interest everybody. One of the club's young camermen with a nose for news caught the zip of the tennis ball that decided the scholastic championship and the end run that won for Central High its season's big game. Shots of the drama club's productions taught the students the vast differences between stage and picture techniques of acting and direction. They learned the difference between types of stage beauty and screen beauty, stage personality and screen personality. The screen is a harsh critic and taught many students new ideas about posture, gesture, and grace.

Every department in school benefited by the new club, often calling upon it to visualize their activities. Experiments in the chemistry course were dramatized by the camera and many interesting shots were taken in the biology department. Art exhibits were recorded and visiting celebrities flashed for a moment across the newsreel.

(Concluded on page ten)



MOVIE SUBJECTS IN AMERICA'S SOUTHWEST

Photographs by H. Armstrong Roberts (except lower left)

Right-Louis Artiz, Governor of Coehito Pueblo, New Mexico



Left—This Navajo silversmith near Thoreau, New Mexico, produces beautiful silver and turquoise jewelry with an anvil of railway track and dies made from old files



Rosalie and Jose Aguilar, well-known Indian artists, decorating pottery at San Ildefonse Pueblo, New Mexico



A Navajo woman near Gallup, New Mexico, spinning wool from her own herds, to be used in making blankets

Left—A wildcat or bob-cat a scene from the Filmo Library 16 mm, silent film release "Wild Life on the Deserts", announced in column three, page 11



R. Cooper, Jr.. Inc., Chicago, found 16 mm. talkies a great attraction at a recent exhibit. A Filmosound presented a sales film dealing with General Electric household appliances. Sound Pictures, Inc., has made many excellent talkies for this progressive manufacturer

MOVIES IN INDUSTRY .. EDUCATION .. MEDICINE ..

Talkies Sell Spark Plugs

CHAMPION Spark Plug Company sales representatives are using B & H Filmosounds and four excellent talkies in dealers' showrooms to entertain and sell the automobile-owning public. One film shows how Champion plugs are made. Another explains, by animation, automobile ignition and the importance of changing spark plugs every 10,000 miles. The third is a thrill picture on automobile racing, pointing out that most racing cars are Champion equipped. Still another takes the audience on an extensive autogyro trip. A fifth film, on how to sell, is in production. Atlas Educational Films Co. and Bray Pictures were the producers. Champion's talkie sales plan is being used in Canada and Europe as well as in the United States.

What Pierce Arrow Has Learned About Sound Outfits

THE Pierce-Arrow Motor Car Company has always found that the good will of private chauffeurs is a valuable sales aid. Chauffeurs are now assembled and shown a forceful sound picture of Ab Jenkins' Mojave Desert endurance run, produced by Metropolitan Motion Picture Service. Pierce-Arrow writes: "From actual ex-

perience we know that, regardless of the initial price, Bell & Howell equipment is by far the most economical in the long run. Any initial saving that might be made in the purchase of a lower priced machine is quickly wiped out by the wear and tear imposed on the film. Moreover, there is no comparison whatever between the quality of reproduction afforded by the Bell & Howell machine and others."

Plastering Demonstrated

CERTAINTEED Products Corp. in the past went to considerable expense and met many difficulties in demonstrating a new wall plaster on locally built frames in hotel rooms. So they had General Business Films, Inc., record a correct demonstration in a one-reel sound film, "Play Day for Plasterers." Now each demonstration is presented smoothly, properly, and with maximum effectiveness and minimum cost.

Inexperienced Operators Use Filmosounds Successfully

HUDSON Motor Car Company's 1934 models were presented at eighty points throughout the United States within one month with the aid of talkies (by Wilding Picture Productions, Inc.) and B & H Filmosounds, which were shipped from

city to city. The Filmosounds were run by inexperienced operators who had only the instruction book to guide them. Yet they gave complete satisfaction — convincing proof of their efficiency and simplicity.

Color Movies with Sound Sell Food Products

HERE'S a sales medium which would seem to reach a new peak in the use of sales appeals! It is used in selling Del Monte food products, and consists of sound motion pictures beautifully done by the Dunning Laboratories in full natural colors and presented with B & H Filmosounds especially adapted for color projection. The value of adding color to the proved sales efficiency of well-reproduced talkies is especially obvious in the case of food products. But color could contribute much to talkie sales programs on other products as well.

Music Lover Praises Filmosound Tone Qualities

IT IS generally recognized that piano and violin music is difficult to reproduce mechanically with anything approaching acceptable fidelity. Therefore this statement in a recent letter is considered as high praise of the Filmosound's tone quality, and is especially significant because the letter was written by the director of the Canadian Bureau for the Advancement of Music: "(The Filmosound's) projection of our film of piano and violin class instruction has been most convincing . . ." Associated Screen News, Montreal, produced this film.

Movies Sell Fertilizer

ANACONDA Copper Mining Co. has had the Chicago Film Laboratory produce two films dealing with the use of their phosphate as a fertilizer. Anaconda salesmen show these films in rural communities with Filmo Projectors.

Movies Help Lease Apartments From the New York Times

SOMETHING new in apartment-house leasing methods has been adopted at the London Terrace apartments, Ninth and Tenth Avenues, between Twenty-third and Twenty-fourth Streets, by William A. White & Sons, agents for the buildings. A motion picture is being shown depicting the daily activities and social features of the average tenant family. Scenes are shown of the swimming pool, the Pent-

house Club, the marine deck, children's playground, the laundries and workshops. The agents report an active renting season.

Finland Encourages Visual Education

FILMO Projectors were given a prominent position in a 16 mm. educational film catalog recently published by the Ministry of Education in Finland for the purpose of extending the use of motion pictures in the schools of that country.

Health Education in Arizona

SECRETARY F. E. Doncette of the Arizona State Board of Health writes that in the first three months after purchasing a Filmo JL Projector they had "traveled 4,834 miles throughout this state, showing health educational films to 25,400 persons, most of them being students in the public schools. This is a new venture and is proving quite successful with the aid of your excellent equipment."

How to get Brilliant Illumination from your present Filmo Projector

AS YOU know if you have read recent Filmo Projector advertisements, vast advances in the illuminating power of these machines have been made in the last year or so. Just how much difference today's high-powered lamps make in screen results you can appreciate only by seeing an actual comparison, which your dealer will be glad to make for you. When you see the wonderful improvement it will make in your pictures, you will probably want today's brilliant illumination. And here is an advantage that is yours as a Filmo Projector owner—you needn't necessarily buy a new projector to obtain this great screen brilliance. Your present machine can be converted, and at a cost less than you might reasonably expect. Here is an outline of what can be done. Your dealer will gladly tell you of the costs.

A 200- or 250-watt Filmo Projector can have its resistance unit removed and replaced with a new lamphouse top containing no lamp resistance. It can then use 300- or 400-watt lamps of 110-, 115-, or 120-volt ratings, whichever corresponds most closely to the prevailing line voltage.

A projector now using a 200-, 250-, 300-, 375-, or 400-watt lamp can be converted to use a 500-watt or a 750-watt line-voltage lamp. In addition to a change in the lamphouse top, the cooling system must be improved to provide for dispersing the greater amount of heat generated by the higher-powered lamp. The plain lamphouse is replaced with a finned lamphouse having an internal shield for concentrating the blast of cool air against the lamp. The new lamphouse also provides supplementary ventilation through openings in its base. A separate switch for the lamp

is an optional addition, permitting turning the lamp off while rewinding film with the motor-driven rewind on Model R and J Projectors.

The projectors listed above can also be converted to use a 500-watt 100-volt or a 750-watt 100-volt lamp by making the cooling system improvement indicated above and by providing the proper new fixed resistance unit in the lamphouse top. Or a variable resistance unit may be installed, together with a voltmeter. If, in converting to use a 500-watt 100-volt lamp, the projector already has a variable resistance unit which is usable, the cost of the conversion is considerably reduced. Old resistance units are not usable in converting machines to use 750-watt lamps. Here too a separate switch for the lamp is an optional change.

Filmo R Projectors now using 500-watt lamps may be changed to use 750-watt lamps, either the 100-volt type or the line-voltage type. In converting to use 750-watt, 100-volt lamps, the projectors may be equipped with either fixed or variable resistance units.

Filmo J Projectors using the 375-watt, 75-volt or 400-watt, 100-volt lamps can be changed to use 500-watt, 100-volt lamps by adding the aero-dual cooling system and changing the resistance unit.

Filmo J Projectors using 375-, 400-, or 500-watt lamps may be changed to use 750-watt, 100-volt lamps. This change involves installing the new aero-dual cooling system, if not already present, and changing the lamphouse base and installing a new variable resistance unit.

ERPI INSTRUCTIONAL SOUND FILMS

Now available in 16 mm. from Bell & Howell by Purchase or Rental

ERPI Instructional Talkies consist of material which could not be presented with equal economy or effectiveness by any other means, such as difficult experiments, timelapse observation (action covering hours, days, and even months), animated diagrams, reproduction of relevant sounds, illustrations from life situations, and microscopic and telescopic motion pictures.

Their value in increasing classroom learning has been positively established. And while they are intended for class-room use at definite age levels, they have been found interesting and valuable for adult educational and cultural groups, including:

> Parent-Teacher Associations Normal Schools Teachers' Conferences Music Study Groups Women's Clubs Civic Organizations

Erpi Instructional Films are available in seven general fields:

Natural Science

Plant Life—8 films
Animal Life—12 films

Physical Science

Produced in cooperation with the University of Chicago—6 films

Social Science-3 films

Music-5 films

Mathematics—l film

Vocational Guidance-2 films

Teacher Training-10 films

Each film is accompanied by a study guide which is a comprehensive outline for the topic of which the picture is a part, and which greatly increases the usefulness of the film.

Prices

Physical Science films, \$50 each. All other Erpi films, \$40 each. Rental, any Erpi film, per day, \$3.50, with no extra charge for second day.

Write for complete information on these talkies and the B&H Filmosound outfit for showing them.

BELL & HOWELL COMPANY

NEW 16 mm. FILM

AGFA Plenachrome

Fine-grain reversible at \$450 the 100-foot roll

HERE'S the answer to your requests for a low priced, high quality film—Agfa Fine-grain Plenachrome Reversible! In daylight its speed is about that of panchromatic. It is sensitive to all colors except spectral red, and is characterized by latitude, extreme fineness of grain, and exceptional brilliance. A special anti-halo coating protects the most delicate details. Prices, including processing and return postage: 100-foot roll, \$4.50; 50-foot roll, \$2.75.

AGFA Panchromatic

Agfa Panchromatic reversible film combines unusual latitude with complete panchromatic color sensitivity. Pictures are clear and crisp, due to the film's latitude and freedom from halation, and have a beautiful brilliance without harsh contrast. Prices, including processing and return postage: 100-foot roll, \$6; 50-foot roll, \$3.25.

AGFA Superpan

Agfa 16 mm. Superpan reversible film has the extreme speed which makes indoor movies easy and practical. Its fine-grain emulsion with anti-halation coating allows large-size projection while retaining clearness and sharpness. Prices, including processing and return postage: 100-foot roll, \$7.50; 50-foot roll, \$4.

AGFA Panchromatic

Negative

This negative film of extremely fine grain has approximately the same speed as reversible panchromatic. Price, not including developing: 100-foot roll (daylight loading) \$3.50; 200- and 400-foot rolls (laboratory packing) also available.

Distributed by
BELL & HOWELL COMPANY

One Hundred Movie Critics

(Continued from page six)

For the first year or so the club had to depend upon individually-owned equipment to do their photoplay work. While the students were learning a good deal, the club felt hampered and decided to put on a show in the high-school auditorium, earn the money, and buy their own equipment. The show was made up of newsreel shots of events in and around Central High. Students were featured in the film. Ten cents admission was charged. The school has a large enrollment and the show was a big success. From the proceeds the first equipment was bought.

Able now to extend their activities, the club worked out a questionnaire on which ten favorite activities were to be checked. Activities included writing scenarios, directing, operating a camera, editing and titling, reviewing professional pictures, learning how to make lantern slides, and all details of management such as press work, announcements, posters, serving as treasurer, selling tickets, and so on. The questionnaire was designed to fit each member into the job which interested him most. The club has been running for five years now and many students have not only acquired stimulating avocations and leisure interests but have been helped in choosing vocations through these experiences.

At club meetings interesting films seen by the members are discussed and voted on. The club compares its list with the lists made by leading picture critics. The fact that a film has been acclaimed by the critics or has won a national award does not mean that it will pass the judgment of the Central High Photoplay Club. As one student remarked, "To undergo serious discussion in our club a picture must have a real plot, the best of camera work and acting—it must be an honest effort. Just a racy story or a popular star is not enough for us."

Since the ideals and activities of the club have become known, it has received considerable local and national cooperation. Local exhibitors invite members to visit their theaters and projection rooms where the operators explain to the students the machines that are used in the exhibition of a modern picture. Local papers give space for club notices and write up the club in articles. National picture producers also are showing interest. Invitations to previews of important pictures have been received by the club and "shoot-

ing scripts" of many internationally prominent pictures have been sent to the club for study. These "shooting scripts" are the actual final working scenarios compiled from the efforts of experienced adapters, dialogue writers, scenic designers, cameramen, lighting experts, sound men, and directors.

So many inquiries have come from schools all over the country asking how to form such a club that it is believed that this Photoplay Club idea in time will become a national one. By improving public taste such a movement can go a long way in solving the problem of better pictures. When good taste is sufficiently developed, the general demand will be for good pictures and censorship will be unnecessary.

10% Discount on Camera Repairs

NOW is the time to have your Filmo Camera thoroughly cleaned, lubricated, and inspected, so that you can be sure of its first class condition for the summer outdoor season.

Send your Filmo Camera to the Bell & Howell factory or branch located nearest to you. If its age is within the guarantee period, we will clean, lubricate, and inspect it gratis. If its guarantee has expired, a nominal charge will be made for this service.

Should our inspection reveal a need for repair work, an estimate will be submitted for your acceptance before we proceed.

10% discount from our established service charges will be given on all Filmo Camera cleaning, lubricating, inspection, and repair bills until June 30, 1934. This offer is made to bring cameras in for service ahead of the rush summer months.

Museum Displays Early Filmos

THE Franklin Institute Museum, Philadelphia, has on exhibit the first Filmo 16 mm. motion picture camera and projector, built in 1923 and used regularly until placed in the museum recently. Beside these early instruments are shown today's finest Filmo Camera and Projector, models 70-DA and JS, respectively. The museum display also includes the Bell & Howell 35 mm. Eyemo Camera carried by Commander Byrd on his trans-Atlantic flight in 1927.

Mhat's New?

"The Fan Dancer of Hollywood-at-the-Fair," featuring Faith Bacon and her beauteous chorus, is one of several World's Fair films released after our last issue went to press. 100 feet, 16 mm., \$6.

Another new film, quite different in subject matter, is "The Evolution of the Kitchen." It portrays the culinary facilities of many lands and generations. 400 feet, 16 mm., \$20.

"Wings of a Century," the Fair's gigantic pageant of transportation, may now be seen more completely in a 400-foot 16 mm. film version at \$20. The 200-foot 16 mm. film at \$10 necessarily touches the high spots.



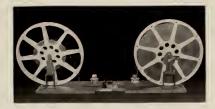
Speaking of films, any film will become soiled in time, and should be cleaned to give good screen results and to prolong its life. The B&H Film Cleaner has been reduced to \$10. It was \$13.50. You attach it to your Filmo Projector occasionally and clean your films as you project them.



A one-hour show without a stop is made possible by the new B&H 1600-foot reels and 1600-foot reel attachment for any Filmo Projector having an oval base. This film capacity is especially desirable for lectures, commercial users, schools, churches, and clubs. The reel is \$5.50; the attachment, \$50.

Other new B&H reels have 16 mm. film capacities of 1200 feet (\$4.50) and 800 feet (\$2.50). Like the 1600-foot reel, they are of steel, springy, strong, and long-lived, and

always admit and pay out film freely.



Where there are large reels, there must be a suitable rewinder and splicer. Hence the new B&H unit shown above—built to handle 1600-foot (and smaller) reels. Including Dry Scraper, \$21.



There has also been a demand for greater film capacity in projector attachments for the repeated showing of a film. This demand is now met with a new B&H continuous attachment which handles 600 feet of 16 mm. film. This unit is used near, but separate from, the projector, and can be used with any 16 mm. projector, silent or sound-on-film. Details upon request. Other B&H Continuous Attachments have capacities of 150 and 400 feet of 16 mm. film.

You needn't let your films suffer for lack of titles just because you don't get around to making the titles yourself. Just write out the desired wording for each needed title, then ask your dealer to show you his Bell & Howell Title Craft sample book. If you select a plain or an over-all figured title background, your titles will cost you only 45c each if of ten words or less. And they'll be hand set from actual type, in true professional style. Titles on pictorial backgrounds are 75c (ten words or less). Your main and credit titles will be set in suitable type sizes at no increase in price. See Christmas Filmo Topics, page 9, for title reproductions and additional information.

Filmo Library has released four new silent 16 mm. films picturing animal, plant, and Indian life in America's southwest. They are both entertaining and educational. Titles:

Wild Animals of the Desert. Antelope, chipmunk, rattlesnake, badger, skunk, and coyote..adaptations to environment..life habits. M-238. \$26.

Wild Life on the Deserts. Topographical and geologic aspects, plants, and animals of the California desert. M-239. \$26.

Hopi Indians of the Painted Desert. How the Hopis live in their Arizona pueblos. M-240. \$26.

Among the Navajo Indians. Navajo family life, industries, and crafts. M-241. \$26.



Kodacolor projection has been improved again! A lighter three-color filter, which transmits more light to the screen, is now a part of the Kodacolor projection lens and filter assembly which converts any Filmo Projector for showing color movies. This assembly has been further improved with a new back compensator lens and a different auxiliary condenser. The benefits are purer, richer colors, brighter pictures, and the elimination of all traces of color bands at the edges. Your Kodacolor projection assembly can be given these three improvements for \$13.50.

With colorful Springtime just ahead, we can't leave the subject of Kodacolor without mentioning the new adjustable Kodacolor filter for Filmo Camera lenses. As explained in the last issue of **Topics**, this filter has alligator jaws with five "stops", and so does not require the use of neutral density filters for controlling exposures. Furthermore, the largest stop admits 75% more light than the former filter, giving color movie making considerably more latitude. The new filter is \$14.

The B&H Eyemo 35 mm. Camera may now be had, on special order, with a speed range of from 8 to 48 frames per second. This model, known as 71-CD, is otherwise like Model 71-C, having three-lens turret head, variable area viewfinder, hand crank and spring motor, and many other features which recommend it for exploration, scientific, news reel, industrial and other uses. Eyemo 71-C Cameras can be converted to increase their maximum speed from 32 to 48.

BELL & HOWELL COMPANY

Found

Filmo Camera near Holly, Colorado. Owner write C. Q. Chandler, Wichita, Kansas.

Missing Equipment

Filmo 70 Cameras

Dummy, Filmo 70-D. Almer Coe & Co., 78 E. Jackson Blvd., Chicago.

No. 15,159. Miss Edith Siegmund, 27 Condado St., Santurce, Puerto Rico.

No. 25,602. 3-speed. Mr. Jud Yoho, Yoho & Hooker, 523 Williamson Ave., Youngstown, Ohio.

No. 28,418. 3-speed. Norman G. Meyers, 350 Broadway, New York City.

No. 38,996. Filmo 70-A. The Travelers, 30 S. Broadway, Yonkers, N. Y.

No. 52,591. Filmo 70-DS. A. Mangan, 22 E. 40th St., New York City.

No. 54,095. Filmo 70-D. Toplis & Harding, Inc., 116 John St., New York City.

No. 55,189, Filmo 70-D. Notify Bell & Howell Co., 1801 Larchmont Ave., Chicago.

No. 56,417. Filmo 70-D. T. M. McArdle, 30 N. La Salle St., Chicago.

No. 140,296. Filmo 70-DA. H. J. Morris, 171 Victoria St., Westminster S. W. 1, London, England.

Nos. 144,697 and 149,715. Filmo 70-A. Abe Cohen's Exchange, 120 Fulton St., New York City.

No. 151,748, Filmo 70-D, Cooke lenses 3³/₄"
 No. 190,692 and 2" No. 205,711. Andrew J. Lloyd Co., Boston.

No. 153,780. Filmo 70-E. Notify Bell & Howell Co., 1801 Larchmont Ave., Chicago.

Filmo 75 Cameras

No. 38,814. John D. Gay, Jr., Trinity College, Hartford, Conn.

No. 148,375. Frederick W. Cloud, Penn Athletic Club, Rittenhouse Square, Philadelphia.

Filmo Projectors

No. 11,204. James O. Sword, Higgins Estate,Inc., 201 Higgins Bldg., Los Angeles, Calif.No. 16,112. David Challinor, Darien, Connecticut.

No. 25,580. Edward Reilly, 1408 S. 17th St., Maywood, Ill.

No. 26,549. Wm. O. Freeman, Evanston, Ill. No. 34,464. Home Movies Co., 2025 Euclid Ave., Cleveland, Ohio.

No. 55,485. Lyon & Healy, Wabash & Jackson, Chicago.

No. 142,155. Board of Education, New York City.

No. 152,066. H. C. Wilson, 4655 Lake Park Ave., Chicago.

No. 154.123. Filmo JS. Almer Coe & Co., 78 E. Jackson Blvd., Chicago.

No. 154,228. Brooklyn City College, 383 Pearl St., Brooklyn, N. Y.

Eyemo Cameras

No. N-1796. Paramount Studios, Hollywood, California.

Film Contest Winners

THE United States placed third in the Third International Contest for amateur films, Japan and France taking first and second positions, respectively.

Three Filmo owners were among those who won the first and second individual prizes in the three 16 mm. divisions. K. Tsukamoto, Filmo owner in Japan, won first in 16 mm. travel films. L. Erizzo, Italy, owner of a Filmo 70-E, won second prize in the 16 mm. photoplay class. S. W. Childs, New York City, won first in "Other sorts of films, 16 mm.," with the same Filmo-made subject which won him third general prize in the American Cinematographer 1932 amateur film contest.

More than 33,000 feet of film were entered in this Third International Contest. It is thought that the next International Contest will be held in Tokio, Japan, late in 1934.

From Pontremoli & Cia., Milan, Bell & Howell distributors for Italy, comes the news that Filmo owners won all the prizes in the amateur film competition held late in 1933 by the Associazione Fotografica Ligure. First prize was won by L. Erizzo with the same Filmo-made photoplay which won him second place in his class in the Third International Contest. Second and third prizes were won by Mr. Pellerani (Filmo 75) and Giorgio Poss (Filmo 10), respectively.

Travel Films Loaned Free

THE Cunard and Anchor Lines, 25 Broadway, New York City, have an excellent and growing library of 16 mm. silent travel films which are loaned free to responsible persons and organizations. The places presented in these films now include the West Indies, Bermuda, Bali, Java, Cambodia, Indo-China, Hong Kong, Hawaii, the Philippines, Adriatic countries, Europe, and Ireland. More complete information about these films may be had from the address given above.

Filmosounds

No. 152,064. T. L. Marshall, Plymouth Motor Corp., Detroit, Mich.

No. 152,066. Wagner & Glidden, Inc., Insurance Exchange, Chicago.

No. 152,094. Plymouth Motor Corp., Detroit, Mich.

Standard Projection Lens

No. 218,331. 4½-inch Apermax Lens. Notify Bell & Howell Co., Chicago.

Questions and

• Answers
Conducted by

R. FAWN MITCHELL

Filming Fast Action

Q. When filming track events, tennis, football games, and other sports characterized by fast leg and arm action, how can one avoid the seemingly inevitable blur?

A. The question of photographing fast moving objects is an example of relativity. If you get close to a moving object and photograph it at a right angle, its speed past the camera will invariably blur the picture. However, one of the peculiarities of the motion picture is that the images in single frames may appear blurred, but by illusion the object appears sharp when shown as a motion picture. By taking an oblique shot, or by getting farther away, the apparent motion of the object is reduced. You have the choice of changing the camera angle, or the distance. or using a lens of shorter focal length, or increasing the speed of the camera, or any of these in combination, to obtain the effect desired.

Reversing Action

Q. Can the effect of riding forward in front of a moving object, such as a locomotive, be produced without having to take such a position?

A. Yes, by shooting from the rear of, for instance, the train, with the camera upside down. Before being projected, the film is turned end for end. Any action may be reversed this way.

Cameras in the Rain

Q. I wanted to take some important pictures in a rain storm, but hesitated for fear of damaging my Filmo. Was this fear needless?

A. Many have used their Filmos in the rain without damage. The foremost possible difficulty is that rain might splash into the lens. The use of a small hood over the lens should eliminate this possibility.

Composing Close-ups

Q. In photographing at close range with my Filmo 70, I find that my subject is off center. Should I compensate for the offset existing between the viewfinder and the lens?

A. Yes. The center of the viewfinder is exactly 1½ inches from the center of the lens. This distance is insignificant when shooting the average scene, but when working at short distances the camera should be shifted to the left 1½ inches. You may want to use the B&H Focusing Alignment Gauge, a tripod accessory for automatically centering the viewfinder and then the critical focuser in the position to be occupied by the lens when the scene is filmed.

"Our movies are much better since we got our

FILMO!"*

*Such observations, so frequently heard, bear out Bell & Howell's conviction that it takes fine equipment to make fine movies. So here is fine equipment, built as well as Bell & Howell, for 27 years maker of the preferred professional cine-machinery, can make it.



Filmo 70-D Camera

Filmo 70-E Camera



Filmo J Projector—the finest that money can buy, and the only fully gear-driven 16 mm. projector. Has lever-operated power rewind, fast Cooke F 1.65 lens, built-in pilot light, convenient tilt control, variable resistance unit, illuminated volt-meter, and 750-watt or 500-watt biplane filament lamp. A refined cooling system assures lamp efficiency and prolongs lamp life. And here's news! There is real economy in using the 750-watt lamp, besides the advantage of having maximum illumination when you need it. Burned at 93 volts, the 750-watt lamp gives as brilliant a picture as the 500-watt lamp does at 100 volts, and lasts almost three times as long! With case, \$298 and up.

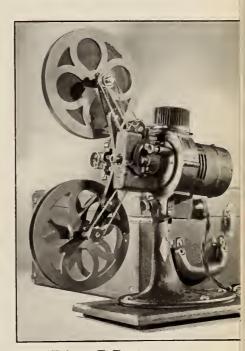
Filmo 70-D Camera—the choice of those who want the most versatile of fine cameras. The three-lens turret permits split-second shifting from the regular to a speed or a telephoto lens. A turn of a dial matches the viewfinder field to that of any lens from 20 mm. to 6-inch. There are seven speeds, from 8 to 64 frames a second. A critical focuser is optional. With case, \$251 and up.

Filmo R Projector—a moderately priced machine offering the latest improvements in illumination and in operating convenience. There is a power rewind, an improved cooling system, and a manual framer for out-of-frame prints. May be had with 500-watt or 750-watt lamp. A sturdy, convenient case is included. Price, \$195 and up.

Filmo 70-E Camera—a moderately priced 16 mm. camera which will do superbly the things most amateurs commonly require. It has four film speeds, ranging from one-half to four times normal, and your choice of two fine Cooke lenses: 1-inch F 1.5 or 1-inch F 3.5. Price, including case, \$150 and up. Bell & Howell Company, 1842 Larchmont Ave., Chicago.



Filmo J Projector



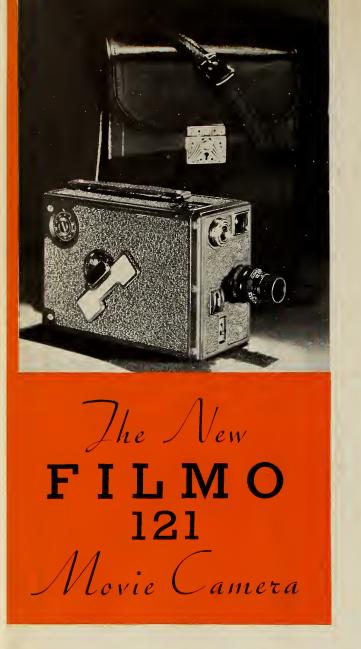
Filmo R Projector

Take any familiar film to a Filmo dealer. Ask him to show it on a modern Filmo Projector. The machine will speak for itself and we think you'll want it!

HOWELL FILMO

PERSONAL MOVIE CAMERAS AND PROJECTORS

PROFESSIONAL RESULTS WITH AMATEUR EASE



With the new Filmo 121 Camera, you can switch from regular monochrome film to Kodacolor or super-sensitive pan any time you want to. Magazine-loading results in this convenient, film-saving flexibility—eliminates the need of a darkroom for changing unfinished films. Just pull out one magazine and slip in another. No threading of sprockets!

The Filmo 121 oscillating focal-plane shutter gives perfectly uniform exposure over the entire picture area. This is absolutely necessary for good monochrome results, and is **vital** for successful Kodacolor pictures.

Any Filmo 75 Camera lens fits the Filmo 121 Camera. Any Filmo 70 Camera lens can be used by employing an inexpensive adapter. So, as an "assistant" camera, the Filmo 121 will take every Filmo lens you now own. Regular equipment with Filmo 121 is the fine Cooke 20 mm. F 3.5 universal focus lens. It may also be had with the Cooke 1" F 1.8, fine for both monochrome and Kodacolor.

Filmo 121 is the "handiest" camera you can imagine. It weighs only 37 ounces, and is small enough to slip into a coat pocket. It has both spyglass and waist-level viewfinders, the former showing the fields of 20 mm., 1", 2", and 4" lenses. There are two speeds, normal and 24. The starting button gives you movies or single frame exposures (for animation work). A comprehensive exposure guide is built into the camera's side.

Go to a Bell & Howell dealer today and get your hands on this new Filmo Camera. And when he tells you it's only \$67.50, take his word for it! We'll mail literature if you like.



The Filmo 70-D Camera—Three-lens turret head permits carrying speed and telephoto lenses always on the camera, ready for instant use. Seven film speeds give latitude for every kind of movie shot—slow to fast motion in all degrees. A unique adjustable area spyglass viewfinder frames the picture for any lens. Optional equipment is the critical focuser, giving direct focus through the lens. With Cooke 1" F 3.5 lens and Sesamee-locked case, \$251 and up.

The Filmo 70-E Camera—Four film speeds, 8 to 64 frames a second, and the Cooke I" F 1.5 speed lens in its single-lens head make Filmo 70-E a camera with which to conquer photographic extremes. Perfectly exposed movies are possible under the most adverse lighting conditions. In making color movies (using Kodacolor equipment) Filmo 70-E gives results of startling fidelity and beauty. With case, \$185. With F 3.5 rather than F 1.5 lens, \$150.



BELL & HOWELL

FILMO

PERSONAL MOVIE CAMERAS
AND PROJECTORS

Bell & Howell Company, 1842 Larchmont Ave., Chicago

New York; Hollywood; London (B & H Co., Ltd.) Established 1907



FILMO 70-D now only \$225

with case and Cooke 1-inch F 3.5 universal focus lens



Personal Movie Camera

1 Seven film speeds—8 to 64 frames per second; accurately assured by precision governor.

2 Three-lens turret head. Regular, wide-angle, speed, or telephoto lenses instantly available.

3 Spyglass viewfinder, variable for six field areas.

4 Built-in relative exposure chart.

- 5 Instantaneous start and stop. Always stops with shutter closed.
- 6 216° shutter opening, admitting about 20% more light than the commonly used 180° shutter.
- 7 Critical Focuser, for focusing any lens directly on the subject (\$25 additional).

Filmo Auxiliary Equipment for Advanced Cine-Photography

- 1 External 200- or 400-foot magazine.
- 2 Electric motor drive, 12- or 110-volt.
- 3 Hand crank. (Among other advantages, permits winding film back for double exposures and lap dissolves.)
- 4 Masks, and provision for insertion at aperture.
- 5 Single frame exposure trigger (for animation work).
- 6 Animation and title stand.
- 7 Equipment for taking microscopic and macroscopic motion pictures.

Even though provided with supplementary devices for highly specialized work, Filmo can always be used as a simple hand-camera at a moment's notice.

FILMO CAMERA PRICES

Filmo 70-D Camera, 1-in. F 3.51ens, case \$225.00 Filmo 70-E Camera, 1-in. F 3.51ens, case 150.00 Filmo 70-E Camera, 1-in. F 1.51ens, case 185.00 Filmo 75 Camera, 20 mm. F 3.51ens.... 59.50 Filmo 121 Camera, 1-ineh or 20 mm. F 3.51ens.... 67.50

NEW PRICES FOR FILMO PROJECTORS

Filmo dealers are offering new low prices on Filmo Projectors of the "R" series: 500-watt, 750-watt, and 750-watt with variable resistance and voltmeter. Filmo JS Projector, all-gear drive, 750-watt lamp, variable resistance, voltmeter, case, \$280.

BELL & HOWELL

Filmo

Personal Movie Cameras and Projectors 1842 LARCHMONT AVENUE, CHICAGO, ILLINOIS New York • Hollywood • London (B&H Ltd.) • Established 1907

PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL

FILMO TOPICS

Published in the interests of personal motion picture makers and users by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

VOLUME 10

AUTUMN 1934

NUMBER 2





... a scenario for a comedy starring your son

H. A. WILDE

curled up in a chair or window seat, reading a book.

Scene 6. Close-up flash showing that the book is an animal book, open to a picture of a squirrel.

Scene 7. Back to Scene 5. Medium close-up. The boy's lips move slowly as he pretends to read, and stop as a

thought strikes him. He pulls at his ear meditatively.

Scene 8. Flash back to Scene 1, or fade in and out of an upper corner of a continuation of Scene 7, by double exposure, a scene of the squirrel burying a nut.

Scene 9. Continuation of Scene 7. The boy looks around as his expression indicates that an idea is forming. His eye lights on something out of the picture. The decision is made and he lays the book aside, gets out of the chair, and exits in a purposeful fashion.

Scene 10. Close-up of a bowl of unshelled nuts on a table. The boy's hand reaches in and grasps a handful several times in succession.

Scene 11. Close-up of handfuls of nuts going into the boy's pants pockets, which are bulging full.

Scene 12. Medium-shot of the boy re-

moving nuts from his pocket and tucking several under the cushions of a chair.

Scene 13. Medium-shot—the boy putting nuts under rug.

Scene 14. Medium-shot—putting nuts in a pitcher on a pantry shelf. (Use an opaque pitcher.)

Scene 15. Putting nuts among linens in the bathroom linen closet.

Scene 16. Boy up on a chair before mother's dressing table, pushing almonds and pecans down into a large jar of cold cream.

Scene 17. Boy opening the flour bin, pushing a number of nuts down into the flour, and carefully covering them. Fade out. (Continue with such scenes as long as you can think of hiding places or as long as you want to use footage. You'll get a lot of good shots of your son and heir in interesting action this way.)

Scene 18. Close-up of the lower part of the front door. The door opens, father's feet cross the threshold, and the door closes.

Scene 19. Close-up of father's legs, the door in the background. Boy runs up. Father's hands reach down, pick up boy, Camera pans up, following boy as he is lifted and greeted by father.

Cast of Characters: A small boy, mother, father, and the colored cook.

Scene 1. Close-up of a squirrel burying a nut. (A squirrel, given a nut at this season, will invariably proceed to bury it, so there will be no difficulty in directing your character in this scene.)

Scene 2. Medium close-up of the small boy. His eyes and attitude register the fact that he is watching the squirrel with absorbed interest.

Scene 3. Flash back to the squirrel as it pats dirt over the buried nut and scampers away.

Scene 4. Flash back to a close-up of the boy's head. His cyes follow the presumed path of the squirrel as it runs along the ground and up a tree. Thoughtful expression. Fade-out.

Scene 5. Fade-in. Medium-shot of the boy

Scene 20. Close-up of boy in father's arms. Boy speaks.

Subtitle. "Daddy, if I eat lots of nuts can I climb trees like squirrels do?"

Scene 21. Continuation of Scene 20. Father laughs, nods head in genial affirmative as he says:

Subtitle. "Oh, sure you can, Tommy." Cut back to a continuation of Scene 21. Fade-out.

Scene 22. Medium long-shot of father crossing the living room. Camera follows as he picks up newspaper from table and wearily drops into a chair. Immediately sits up in startled surprise.

Scene 23. Close-up of father edging over and reaching down between cushion and arm of chair. Brings up his hand full of broken nuts.

Scene 24. Medium close-up of mother at her dressing table, brushing her hair back and fastening a small towel over her head. She reaches for the cold cream jar, opens it absently while studying her face in the mirror, extracts a blob of cream with her fingers, and applies it while continuing to gaze into the mirror.

Scene 25. Medium close-up into the mirror. (Show edge of mirror and some of the articles on the table to identify the actual articles from the reflection.) Reflected image of mother's face shows in rather lumpy outline. With amazed surprise mother picks cream-embedded nuts from her features.

Scene 26. Continuation of Scene 24, showing mother fishing out and scraping nuts from the cold cream jar. She registers irritation and surprise as she reveals nut after nut. Fade-out.

Scene 27. Medium close-up of father in the bathroom. He is splashing in the basin, washing his face. He straightens up and reaches for a towel, but there is none on the rack. He paws around with his eyes closed, locates the linen closet, opens the door, and pulls out a folded towel. A shower of nuts rolls out onto the floor. He hastily dabs at his eyes, jumps, and after rubbing an irritated eye, removes a walnut from a fold of the towel. He registers bewilderment as he looks from the walnut in his hand to the mess on the floor. (If linen closet is not near basin, make a follow shot.) Fade-out.

Scene 28. Long-shot across the dining room table toward the door leading to the living room. Mother appears in the doorway, turns and calls her son. He comes

to her rather slowly and takes her hand. She puts him in his chair at the table and fixes a napkin around his neck. While she is so doing, the boy yawns and looks at his plate in a tired fashion. Father appears in the doorway, smiling and with a look of anticipation. As he enters, he gives a little jump, stops and looks down. The smile disappears.

Scene 29. Close-up down shot of father's feet on the rug. His hand reaches down,



lifts the corner of the rug, and reveals a crushed nut.

Scene 30. Long-shot. Father registers anger, and glares at the boy, who hangs his head and pretends to be interested in adjusting his napkin. Mother looks a bit disturbed for a moment, glances at the boy, then back to father, who is protesting angrily. In pantomime he re-enacts the bathroom episode. Mother forces a smile, requests father not to make a scene at the table, and gets him to sit down, which he does reluctantly.

Scene 31. Medium-shot of the colored cook at the stove, about to make gravy. She places the pan over the flame and turns away.

Scene 32. Close-up of cook's hand with measuring cup, dipping into the flour bin. Scoops up flour.

Scene 33. Same as Scene 31. Cook stirs liquid in pan and starts to pour in a little flour. Several nuts drop into the pan, to the cook's amazement. She peers into the pan, then into the cup; reaches into the cup and pulls out a walnut, wiping off the flour as she speaks.

Subtitle. "De groceryman says dis heah flouah am de nuts. Reckon he mus' be speakin' de truf' fo' once in his life."

Scene 34. Continuation of Scene 33. Cook puts the cup down and proceeds to fish several small nuts out of the gravy pan with a spoon.

Scene 35. Medium-shot of cook at stove

finishing gravy. She hears a call from dining room, answers "Yes'm, Ah's comin'," hastily sets the gravy pan aside grabs water pitcher from pantry, puts in a piece of ice from a bowl and holds the pitcher under the water faucet. Her attention is on the stove and the pans thereon, so she does not watch the water closely. She turns off the faucet and hurriedly exits into the dining room.

Scene 36. Close-up of water glass and immediate surroundings on the dining room table. Cook's hand with water pitcher enters and pours water into the glass. A stream of nuts splashes into the glass.

Scene 37. Medium-shot of father and cook across corner of table. She is in a state of bewilderment, and reaches for the glass. Father angrily reaches also and the glass is upset, the nuts scattering. Father attempts to mop up with his napkin, while the cook uses her apron with good intentions but poor efficiency.

Scene 38. Close-up of father glaring angrily across the table. His expression slowly changes from grimness to ill-suppressed amusement.

Scene 39. Close-up of mother looking in the same direction. She tries to look stern but her face gradually relaxes and she glances toward father with a half smile.

Scene 40. Close-up of cook. Her eyes follow those of the others. The worried look fades and she holds back a hearty laugh with difficulty, covering her mouth with her wet apron.

Scene 41. Medium close-up of boy in his chair, fast asleep. Fade-out.

Subtitle. THE END.

10% Discount on Projector Repairs

FILMO Projectors received at our Chicago factory before November 15 will be repaired at 10% less than the established rates. The purpose of this offer is to encourage users to have their Filmo Projectors put into first class condition early in the season when projectors are usually most used. The 10% discount will also apply to projector conversion work, that is, the altering of projectors to use today's high-powered lamps. Projectors to be repaired or improved under this discount offer may be sent to Bell & Howell through your dealer, as usual, and must be in our hands on or before November 15, 1934.

AUTUMN 1934

FILMO NEWS PICTORIAL



Senator A. L. Rule, Mason City, Iowa, who for years has been active in taking monochrome and, more lately, Kodacolor movies of the national parks and monuments



Commander G. O. Noville, Aide to Admiral Byrd, taking movies with his Filmo 70-D Camera on the S.S. Jaeob Ruppert during the trip to Little America. A recent radiogram from Commander Noville, from Little America, said, "The Eyemo and two Filmo Cameras are functioning as perfectly at 70 below as in tropics."



LEO J HEFFERNAN



Mrs. R. C. Matthews, Toronto, using her Filmo Camera aboard the S.S. Empress of Australia on a Mediterranean cruise

Ben Lyon, screen star, was photographed while taking movies of New York City from a hotel roof

FILMING WATER-FOWL on the Rainey Sanctuary

F. R. DICKINSON

President, The Chicago Academy of Sciences

Illustrations are enlargements from Eyemo-made negatives by the author

IN THE midst of the coastal marsh of Louisiana lies a tract of 26,000 acres known as the Paul J. Rainey Wild Life Sanctuary, a successful example of what may be done to preserve our diminishing stock of migratory water-fowl; for there, during the winter months, are gathered large flocks of scaup ducks, mallards, canvas-backs, ring-necks, pintails and others, and many thousands of blue geese, seasonal visitors from their nesting grounds in far off Baffin Land. While on the Sanctuary all of these guests are rigidly protected from hunters, and to attract and hold them the ducks are frequently baited with quantities of rice.

Late in December, 1933, Mr. A. M. Bailey,

Director of The Chicago Academy of Sciences, in company with the writer, visited the Rainey head-quarters for the purpose of making motion pictures wanted by Dr. T. Gilbert Pearson, President of the National Association of Audubon Societies, which owns and operates the refuge. Dr. Pearson joined us and for ten days we enjoyed the hospitality of Dick Gordon, the superintendent in charge, in a comfortable lodge built on an artificial island in the heart of the marsh.

For some time Gordon had been feeding the ducks near several grass blinds at selected spots close to open water. A pre-



The light, portable Eyemo Camera and B&H Tripod were found ideal for water-fowl filming

liminary inspection trip in one of his motor boats brought out two facts: that there would be plenty of ducks and geese to photograph, and that our Bell & Howell Eyemo Cameras were ideal for the work. Within the blinds the footing was half mud and half water in which it might be hard to keep our heavier camera and tripod from shifting. For the stalking of the geese, which must be done on foot or on all fours, every extra pound would cut down the chance of success.

We went after the ducks at once. About eight o'clock each morning the work boat made its round, baiting from ten to fifty feet out in front of the blinds. By nine we were in place and ten minutes later could hear the splash of small flocks



To reach the shy pintail ducks it was necessary to pole through narrow waterways in a pirogue

Right — Pintails at close range, after they had finally gained enough confidence to swim up near the blind and begin feeding AUTUMN 1934

dropping in from the open. By ninethirty hundreds of birds, diving and throwing spray into the sunlight, were milling about before the camera. A few close-ups with the six-inch lens, a few scenes with the two-inch, and we were ready to move—usually ending by scaring the birds up for a flight picture. This procedure soon gave us all we wanted of scaups, mallards, and ring-necks, but the pintails were not so easy.

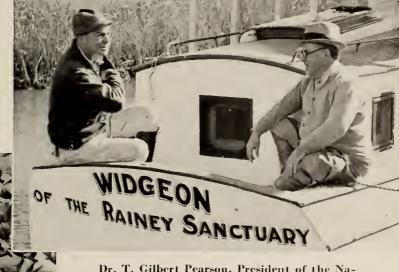
To reach these shy ducks we had to visit a small pond in a remote section of the reserve, poling through narrow waterways in a pirogue. Once inside the blind we might have to wait an hour or two for the welcome sound of returning flocks, and then, for another hour, watch through a hole in the side of the blind while they got up confidence enough to swim out in front and begin feeding.

When we went after the geese there was no such idling about in a blind. The blue goose feeds on the roots of a three-cornered grass growing in the open marsh which stretches flat and wet to the horizon, broken only by scattered beds of tules or a brackish bayou. Over the feeding flocks, which may number ten thousand individuals or more, sentries are circling much of the time. To crawl near, start the camera, and take a reasonable footage before the birds were gone required caution, judgment, and hard work, in all of which we were aided by Dick Gordon and Nick, his assistant, who made every effort to put us close to the big flocks. A passing muskrat trapper might tell us where they were feeding, but without guidance as to the best approach we would have missed good chances. By creeping through mud and water with the Eyemo in one hand, lying low when the birds seemed uneasy, and taking advantage of every patch of grass for cover, we came near enough to several flocks to fill the screen with rising birds at a range of twenty or thirty yards.

At odd times when the light was good, amusement could be found in making a few shots to vary and dilute the too solid reels of water-fowl. By running the camera upside down, a wild duck tossed into the air was made to appear flying down to its captor in the most confiding way. By baiting a quiet bayou with a piece of fat meat we caught the graceful flight of the ring-billed gull, and by poking the eye of the Eyemo through a slit in the wall of a handy shed, we persuaded the redwings and grackles to feed before the lens at a distance of eight or ten feet.

Bird-banding gave us another subject. One sunny afternoon we set up the cameras near the edge of the bayou while Dick cleared the duck trap, returning with some fifty captives. Dr. Pearson and he then proceeded to fix small aluminum bands, bearing serial numbers, to the legs of the ducks, noting the species of each individual against its corresponding number in the official record book before releasing it. The records are forwarded to the office of the Biological Survey, at Washington, where they are ultimately checked against returns from hunters who have shot banded birds. In this way much interesting information on migration has been compiled.

For wild life photography a light and dependable motion camera offers great advantages over the still camera. Action is of course essential to bring out the true characteristics of any living creature. But even for still pictures, enlargements from motion picture frames are better in one respect than single exposures by an ordinary camera, because on a given subject one can choose the best from hundreds of frames, catching a pose or a light effect which no single shot would ever he lucky enough to capture.



Dr. T. Gilbert Pearson, President of the National Association of Audubon Societies (right) and Dick Gordon, superintendent in charge of the Rainey Sanctuary

Blue geese rising from the marsh. Behind the flying flock are thousands more, still on the ground

HUGH RUTTLIDGE, leader of the 1933 Mount Everest Expedition, wrote to our London office that he took his Filmo Camera "up to a height of 22,800 feet on Mount Everest and secured a good record with it. This camera has accompanied me on five Himalayan expeditions and has always given satisfaction...."

SPORTS IN SLOW MOTION

C. E. BRACKETT

HAVE taken many slow motion pictures of track and field events, swimming, diving, tennis, and football, and have shown those pictures to the athletes who took part. In every instance, those who viewed themselves on the slow motion screen have detected some fault or have seen one or more things they could do to improve themselves. And aside from this instructive value, slow motion pictures of athletes in action provide fine entertainment for any audience because of the ordinarily unseen gracefulness which is brought to light by the slow motion camera.

There is no sport that can profit more from slow motion pictures than football. The greatest value is that the players may see themselves through the eyes of the coach and have sufficient time to study each play as it actually happens. A coach, in order to be perfect, should have twenty-two sets of eyes seeing each play. Actually his attention can be placed on only one thing at a time. But slow motion pictures may be run over and over again until the coach has watched each individual execute his part in the play. The movies of the game, when shown to the team and augmented by remarks from the coach, illustrate his analysis in absolute truth. Can't you imagine the value of slow movies of last year's game? Verbal warnings are many times less apprehensive than visual warnings. For these reasons the greatest football coaches use slow motion pictures consistently.

Should you photograph any football games this fall, there are only a few important things to remember. Never take a scene slower than 32 frames per second. Start the camera at the end of the huddle and continue until just after the whistle blows. Get as high and as far away from the play as possible and use a four- or six-inch lens. Have the camera on a tripod. If there is any error in exposure, have it lean to under exposure.

Why 32 speed? Because this speed places the desired results within the scope of the projector. When films taken at 32 speed are projected at eight speed, ultra slow motion (one-fourth the normal action) will be produced, and without a great deal of jumping. If the projector



C. E. Brackett

speed is increased to its maximum, normal speed action will be seen. When the projector is run at its normal speed, the action will be seen at half its actual rate.

It takes an average of 2,000 feet of film

to photograph every play of an entire football game at 32 speed. To film every play, two or three cameras are needed, with an extra person changing film.

The value in shooting at a distance and from a high place, using a four- or six-inch telephoto lens, lies in the fact that you can look down on the players and see the "holes" opened by the offensive team in the opponent's line, thus enabling you to "follow the ball." The four-inch lens, shooting from the fifty yard line on top of the press box at the Los Angeles Coliseum, includes an area of about 121/2 yards in the center and on the close side of the field, and of about fifteen yards in the far center and the close ends of the field. A six-inch lens from the same spot takes in an area of about $12\frac{1}{2}$ yards in the far corners. Your camera should have a turret head, so that you can make a rapid change from one lens to another.

Football pictures even slightly over exposed are not very satisfactory, as the uniforms of most teams are so colored that they blend with the grass in case of over exposure. The exposure *should* be correct, but if any question arises between two openings, use the smaller opening of the two. An under exposed picture is preferable to one proportionately over exposed.

And last, but certainly not least, keep the center of action on the left side of the viewfinder if the motion is directed toward the right, and the reverse if the action is progressing toward the left. The reason for this is that it is more interesting to see what might happen than to see the results of what did happen.

Slow motion pictures make it possible to study the athlete's form as no other method can provide. When seeing the actual event take place, motions occur so rapidly that many details are missed even to the trained eye. Seeing the same action on the screen—two, four, or eight times slower than normal—gives one facts not otherwise seen, especially when the film may be stopped and a "still" projected at any point. There is also a great advantage in being able to repeat the

(Continued on page ten)



H ARMSTRONG ROBERT

"... ordinarily unseen gracefulness ... is brought to light by the slow motion camera."

SOUND FILM IS POPULAR AT 1934 WORLD'S FAIR

B&H Filmosounds and Filmo Projectors are in their second five-month season of constant use

FILMO enthusiasts who go to the Chicago World's Fair this year can be sure that, just as in 1933, most of the motion pictures they see—and they will see plenty—are being projected on Bell & Howell machines.

In the Travel and Transport Building is one of the most ingenious applications of the motion picture that has come to our attention-the Hupmobile Safe Driving Test chamber, pictured above. Here, one driver at a time takes the test of ability in meeting traffic situations. The Hupmobile is mounted on rollers, so that it may be driven just as on the road. On the six-foot screen in front of the car, situation after situation looms up before the driver in thrilling sound movies, presented by a B & H Filmosound mounted above and behind the car. The driver's trials come close together, requiring quick and correct thinking and acting. The illusion is most convincing. After the test, the driver is given a certificate rating his ability. Scores range from 60% to 98%. The test is observed by passengers in the car and by large audiences standing outside the little theater window.

Another new installation this year is that of The New York Central Railroad, in the same building. Here the film, "The Flight of the Century" is shown in a comfortable, semi-darkened little theater with a 750-watt B & H Filmosound. Large, brilliant pictures are shown in spite of the extraneous light.

Still another important new installation is that of the Western Union Company, where a six-foot picture, shown through a translucent screen, tells of the laying of the trans-Atlantic cables.

Space forbids a detailed description of the many other new movie installations at the Fair this year. These include such well-known names as National Standards Company, Bellgaard Optical Company. Diabetes Exhibit, Radiological Society. Nash Motors, Van Cleef Brothers, and Chrysler Motors Corporation. Of even greater significance, possibly, is the list of exhibitors who, with the same Filmo Projectors that they used all through the Fair last year, are now well along in another season of the hardest test ever put on projection equipment.

The International Harvester Company is using five such machines, the Union Carbide and Carbon Company several, the Household Finance Corporation two. Some of the other "repeaters" are Central Station Industries, University of Chicago, Hild Floor Machine Company, U. S. Navy, U. S. Dept. of the Interior, U. S. Dept. of Agriculture, Chicago & Northwestern Railway, Safety Glass Manufacturers' Association, and United Air Lines. In many cases the exhibits themselves have been extensively revamped, and the films remade or improved-but the same Bell & Howell Projectors are standing the gaff for another strenuous five-month season! This is a remarkable testimonial to the stamina built into Filmo equipment, for it has been estimated that in five months of the ten-hour-a-day use at the 1933 World's Fair, these machines had to take as much punishment as they would in fifteen years of ordinary wear.

A distinct trend toward sound-on-film is to be noted. This year almost half of all Filmo installations are sound-on-film, that is, Bell & Howell Filmosounds. Most of the new installations were Filmosounds rather than silent Filmos. There has been a virtual disappearance of the disc type of reproduction; only in cases where the sound-on-disc apparatus was an integral part of the exhibit has it been retained.

Equally evident is the trend toward the automatic continuous type of projection. Only one of all this year's new Filmo installations, and only one of last year's holdovers, are manually operated! Last year manual operation was used in many cases. Furthermore, most of the B & H continuous attachments sold for use at the Fair this year are of the new 600-foot capacity type.



The Hupmobile Safe Driving Test theater—an unusually effective use of sound movies and the B & H Filmosound



New York Central's little theater, where a Filmosound shows an excellent sound film to World's Fair



Chicago & North Western Railway's outdoor theater. Here vacation talkies are effectively presented with a B & H Filmosound

Below — United Air Lines' air travel picture is shown with a Filmo Projector built into a cabinet complete with screen. This theater is under a new Boeing transport plane, reached by the two stairways shown at the rear



FILMO TOPICS



Bridget Bernadotte, great-granddaughter of the King of Sweden, being filmed by her father, Prince Lennart, at his castle at Mainau. The special equipment which you'll notice on the Filmo 70-DA Camera was built especially for the Prince. It permits him to change, during a scene, the focus of any one of three lenses

Title Your Summer Films

WE HOPE that your summer films have all turned out well. And we suggest that now is the time to edit and title them—before you show them to your friends. A little cutting and rearranging, and a few titles where they are needed to tell what the pictures can't tell, will add marvelously to the acclaim with which your films will be received . . . and to their interest and value to you, too

If you haven't the time or inclination to make your own titles, we are ready to make them for you. Bell & Howell's "Title-Craft" service offers truly professional titles at very moderate prices. These titles are handset in real printers' type, with careful attention to good composition and neat, legible appearance. So that you may exercise your personal taste, a wide choice of title backgrounds is laid before you by means of a title sample book at the store of your Filmo dealer. Merely call at your dealer's with the desired title wording typewritten or legibly written out, select from his sample book the backgrounds you prefer, and he'll do the rest. Your titles will come back to you photographed with ample footage on 16 mm. film, ready to splice into your films. Titles on plain black backgrounds, or on your choice of the various fabric and pattern backgrounds reproduced in



A sample "Title-Craft" title

the sample book, are 45c if of 10 words or less, plus 4c for each word over 10.

The sample book also contains artistic photographs in such variety that you can find suitable photographic backgrounds for titles for almost any sort of film. These pictorial titles, if of 10 words or less, are 75c each, plus 4c for each word over 10. Main titles in suitably varied type sizes are supplied at no extra charge.

Whether or not you need titles right now, see the "Title-Craft" sample book the next time you are in your dealer's store. A glimpse will convince you that these professional titles are well worth their cost, quality considered.

Novel Camera Work

Aimé Franche, Montreal, has contributed several ideas for novel movie scenes and titles which may interest you.

White Block Letter Kodacolor titles with changing colors. Proceed in the usual way for Kodacolor work under artificial light, but pass glass or cellophane in various colors across in front of the lights as the camera runs. Of course, sufficient extra illumination must be used to compensate for that absorbed by the material used to color the light.

Illusion of a hill. To make the subject seem to be climbing a hill, slant the camera sidewise out of the perpendicular. If a very sharp angle is given, the subject will have to crawl on hands and knees to complete the illusion. Suggested as a trick which will amuse the child actors.

A title denoting lapse of time can appropriately employ a sand clock in its background.

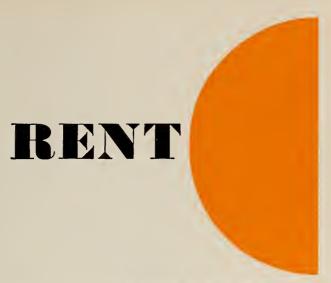
Stop-motion studies of growing plants gain in beauty and value if filmed in Kodacolor. Adequacy and constancy of illumination are prime requisites, so artificial light should probably be used exclusively. Camera, lights, and plant must not be moved during the procedure. The plant seed may be sown against a glass side built into a box, so that the root growth may be included in the record.

World's Fair Film Contest

THE Chicago Cinema Club is sponsoring an amateur motion picture contest confined to films of the 1934 "A Century of Progress" Exposition. Entries must be in the hands of the Club secretary, W. W. Macomber, 11-117 Merchandise Mart, Chicago, by November 15. Films must not exceed 400 feet 16 mm., or 200 feet 8 mm., and will be judged on exposure, composition, continuity, titles, and interest.

Correction

IN REPORTING, in the last issue of Filmo Topics, the praise given to the Filmosound's tone quality by the director of the Canadian Bureau for the Advancement of Music, we stated in error that the Bureau's film had been produced by Associated Screen News, Montreal. The Ontario Government Motion Picture Bureau was the producer. It was the Filmosound that was purchased from Associated Screen News.



PROFESSIONAL PRODUCTIONS

reduced to 16 mm. size for home, school and club entertainment

HESE exclusive Bell & Howell sound-film releases are 35 mm. standard theater subjects, carefully selected by a jury whose chief considerations are clean character, clear sound, photographic quality, and entertainment or educational value. All Filmosound Library subjects are suitable for presentation before any audience in the home, school, church, or club. They are available only through this library and the rental cost is low—\$1.50 per reel for most subjects. Filmosound Library Branches are listed below. Inquire—personally or by mail—at your nearest branch for a catalog of current releases.

B & H FILMOSOUND 16 mm. sound-on-film reproducer may be purchased, or rented at a reasonable rate, from any Library Branch. The widely acclaimed Filmosound is extremely easy to operate, and provides the finest of tone quality combined with brilliant large-screen illumination. Write for detailed information about this superior sound-film projector.

FILMOSOUND RENTAL LIBRARY BRANCHES

Altoona, Pa.—Cohen's
Baltimore—Zepp Photo Supply Company
Chicago—Almer Coe & Company
Denver—The Home Movie Sales Agency
Detroit—Michigan Film Library
Hollywood—Bell & Howell Company
Milwaukee—The Photoart House
Minneapolis—Auditorium Supply Co.
New York City—Willoughby Camera
Stores, Inc.

Omaha—J. G. Kretschmer & Co. Philadelphia—Williams, Brown & Earle, lnc.

Providence—Westcott, Slade & Balcom Co.
San Diego, Calif.—Howard E. Jope
San Francisco—Schwabacher-Frey Co.
Seattle—Metropolitan Film Exchange
Tampa—Burgert Bros.
Topeka—The Hall Stationery Co.

Topeka—The Hall Stationery Co. Wilmington, Del.—Butler's, Inc.

BELL & HOWELL COMPANY

1842 Larchmont Avenue, Chicago

New York Hellywood London (B&H Co., Ltd.)

Established 1907

16 mm. Sound Films

NEW RELEASES

THIS IS AMERICA—American life during the hectic period of 1917 to 1933 as seen by the thrill-hunting newsreel cameraman. Not a depressing war subject, but a dramatic and amusing story of a nation's frenzy, fears, and follies during the so-called jazz age. Six reels.

SEA-GOING BIRDS—Intimate pictures of bird life over the salty sea and on remote northerly islands where human contact is rare. One reel.

TORCHY—A clever two-reel comedy full of fast action and snappy dialog. Torchy goes from office boy to general manager and back to office boy in 30 minutes.

WOODLAND—Another joyous Terry-toon cartoon comedy. Farmer Alfalfa has his usual muddled adventures. One reel.

THE BRIDE'S RELATIONS—The city bride and groom spend a trying honeymoon with the bride's relations on the farm. Andy Clyde at his best. Two reels.

THE NEW HALFBACK—No football game has ever been so divertingly funny as the one in this uproarious Andy Clyde comedy. Two reels.

LOVE YOUR NEIGHBOR—Charlotte Greenwood in a two-reel comedy in which the women's club campaign for neighborly friendliness leads to so many amusing complications that the laughter is practically continuous.

THE MAD KING—A carton operetta packed full of melody and mirth. One reel.

MATCHED PLAY—The combined talents of Andy Clyde, comedy champion, and Walter llagen and Leo Diegel, golf champions, have produced a film which will please anyone, and which every golfer will enjoy hugely.

... and a long list of travelogs, comedies, cartoons, and scientific and educational features, recently released.

Sports in Slow Motion

(Continued from page six)

same action several times by projection.

In ultra slow motion pictures (128 speed) taken of Johnny Riley, reputed to be the world's best diver, many details are shown that are nothing short of amazing. For example, when Johnny executes a forward two-and-one-half dive from the tenfoot board, slow motion pictures make it very evident that two complete turns are made before he gets down to the level of the board. I know of no one who has ever noticed this fact in viewing the actual dive. It is possible to detect the work of particular muscles at this point. Audiences seem never to tire of seeing 128 frame per second pictures of Johnny Riley doing all of his dives.

In this day, in order to reach record marks it is necessary to take advantage of every detail—to leave uncorrected no slight fault which withholds the athlete from perfection. Those all-important weaknesses may be detected easily in slow motion pictures.

In the case of field and track events, slow motion pictures show the difference between ordinary good work and record breaking work. Take the seemingly simple task of putting the shot: John Lyman of Stanford University not only times his whole form perfectly, but he adds the power of the finger thrust, and it may well be that that added accomplishment is what puts him in the limelight. Slow motion pictures viewed by the average shot putter show him exactly where he can improve his form and his accomplishments.



NEW—The B&H Triple-Purpose Splicer

This new splicer handles all sub-standard films — 16 mm. silent, 16 mm. sound, and 8 mm. — with equally good results and with no alteration of the mechanism. The dry scraper shaves off the emulsion with a quick stroke. Cement is applied to the upper film surface. Then pressure on the new automatic film shifter quickly flips this surface beneath as the elamp is closed. Pilot pins retract for easy removal of the spliced film. Cement bottles are elamped beneath the all-metal base, secure against tipping. Price complete, \$10. Without dry scraper, \$7.50.

BELL & HOWELL COMPANY

1842 Larchmont Ave., Chicago

1934 World's Fair—in 16 mm. and 8 mm. Films



THE Century of Progress Exposition, new and different for the 1934 season, is vividly pictured in this series of films by the official photographers. These films are available through Filmo dealers from Bell & Howell. Footages and prices below are for 16 mm. prints. The identical subjects in 8 mm. are half the quoted prices.

Feet	Price
1934 World's Fair	\$20.
1934 World's Fair (condensed) .100	5.
The Fair from the Air100	5.
Villages of the Fair200	10.
Villages of the Fair	
(condensed)100	5.
Black Forest Village100	5.
Wings of a Century200	10.
The Fair at Night100	5.

1933 Fair Films

Not duplicated in the 1934 list above (Burton Holmes Releases)

Feet	Price
The Fan Dancer (Faith Bacon) .100	\$ 6.
Evolution of the Kitchen400	20.
Streets of Paris100	5.
The Llama Temple100	5.
The Belgian Village100	5.
8 mm. prints at half the above 16 mm.	prices.

Beautiful Bermuda

Travelers who want to add to their own Bermuda footage will welcome this new film by Hereford Tynes Cowling, who filmed the island from air, land, and water, and finished with under-sea views.

16 mm. 400 feet, \$20. 8 mm. 200 feet, \$10.

Felix the Cat Cartoons

A new series of Felix the Cat one-reel cartoon comedies, never before offered in home movie sizes, is now available through B&H Filmo Library. List of subjects on request. Prices, 16 mm. \$20. each; 8 mm. \$10. each.

BELL & HOWELL COMPANY

Filmo Library Division
1842 Larchmont Avc., Chicago



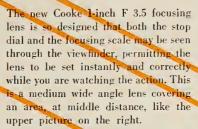
COOKE TELEPHOTO AND SPEED LENSES

ARE UNEQUALLED



KODACOLOR FILTER

This new Kodacolor filter for Filmo Camera lenses extends the scope of color movie making. Its alligator jaw has five "stops". The largest admits 75% more light than the former filter, making color close-ups possible indoors under Photoflood lamps. No neutral density filters required for the brightest light. For Cooke 1-inch F 1.5 or F 1.8 lenses, \$14.



The other two lenses illustrated (with their middle distance areas shown on the right) are a 2-inch F 3.5 Cooke Telephoto and a 4-inch F 4.5 Cooke Telephoto, and are \$55 each. Other Cooke Telephoto lenses for Filmo Cameras are the 3-inch F 4 at \$57.50, and the 6-inch F 5.5 at \$60.

For close quarters the Cooke 15 mm. F 2.5 extra wide angle lens is recommended. Its price is \$45; in focusing mount, \$55.

Cooke Speed Lenses for indoor work are priced as follows: 1-inch F 1.3 (seven times as fast as F 3.5), \$75; 1-inch F 1.5, \$60; and 1-inch F 1.8 (for Kodacolor), \$60.



Professional

Results with

Amateur Ease

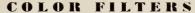
BELL & HOWELL PHOTOMETER

The only exposure meter which permits selecting the important part of the subject on which to take your reading. All readings are taken direct from the scale, including filter and speed modifications. Model A for Filmos, \$15; Model B for "still" cameras, \$15. Leather case, \$2.50.



B&H ALL-METAL TRIPOD

Light, compact, rigid, and sturdy, with tubular metal legs. Quick, correct setting up aided by spirit level. Lengthens from 30 to 53 in. Precise, smoothly operating head provides independent or combined panoraming and tilting movements, controlled by convenient handle. Head and legs dust and grit proof. Rubber tips cover leg spurs for smooth surfaces. Price, \$36. Leather case, \$12.50.



Color Filters are of first importance to the cinematographer who strives for beauty and pictorial effect. B&H Filters are made of dyed optical glass and are not affected by handling or atmospheric conditions. Uniform filters in screw mounts for Filmo 70 and 75 Cameras are supplied in various densities, and range in price from \$2.50 to \$5. The B&H Duplex Filter and Holder is supplied in 2X and 4X density for Filmo 70 Cameras at \$4.50.











BELL & HOWELL * FILMO

Bell & Howell Co., 1842 Larchmont Ave., Chicago, III, New York, Hollywood, London (B & H Co., Ltd.) Est. 1907

Missing Equipment

THE equipment identified by the serial numbers listed below is missing, and has not been reported previously. Any information as to its location will be welcomed by its owners, who may be reached by addressing the Bell & Howell Company at Chicago, New York, Hollywood, or London, England, and stating the serial number of the missing unit which has come to your attention.

151	lmo.	70	Cam	PTOS

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4,541 22 885	36,482 58,057	143,772, 70-DA 148,218, 70-D				
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25,311	59,366, 70-D	149,898				
25,671	59,536, 70-D	150,558				
31,482	59,674, 70-D					
	Filmo 75 Can	neras				
48,940	49,677	147,134				
Filmo Projectors						
2,322	142,726	146,809				
2,943	145,187	148,037				
54,245	145,789	149,485				
61,995	146,065	149,933				
141,811	146,465	150,794				
141,907	146,762	150,808				
	Eyemo Cam	eras				
146,041	149,909					
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Movie Makers Magazine

FILMO owners who have not been reading Movie Makers, official magazine of the Amateur Cinema League, will do well to start enjoying that publication with the October issue. Advance information indicates that this issue is well up to the publication's high editorial standards. Among the subjects included are fall filming, projector care and the presenta-

tion of home movie programs, camera tricks, composition, producing hunt films, scenario preparation, and filming children. Ben Lyon and Bebe Daniels tell how they use their amateur movie camera (a Filmo) in making personal family pictures. A sample copy of *Movie Makers* may be had on request to the League headquarters at 105 W. 40th St., New York City.

Audiences of 3500 and 3600 Served by 16 mm. Projectors

TWO convincing illustrations of the Bell & Howell Filmo 750-watt Projector's tremendous illuminating power were reported recently. One report came from Carnegie Hall in New York City, the other from the Auditorium Theater, Chicago.

At Carnegie Hall, 3500 were entertained by Dr. Konstantin Kostich with his three-reel 16 mm. scenic film of the Bermuda Islands. The Filmo JS Projector, with a 4-inch lens and a 110-foot throw, filled a 10-foot screen with brilliant pictures. Our reporter states "The management could only supply a 10-foot screen, but a larger screen could easily have been used, as the projector offered ample light." Dr. Kostich, who makes some of the most beautiful travel films that we have seen, uses an early Filmo 70-A Camera exclusively.

In the Auditorium Theater 3600 people viewed a 16 mm. movie program sponsored by the Cook County Medical Society. Here the Filmo JS Projector was 110 feet from a 12-foot screen, and a 3½-inch lens was used. A prominent member of the Medical Society said, "The showing was absolutely just as professional as anyone would want."



A few of the many Filmo-owning physicians and surgeons aboard the S.S. Pennsylvania on the cruise of the Pan American Medical Association. Every type of Filmo Camera is represented—70-D, 70-E, 75, and 121

Questions andAnswers

Conducted by R. FAWN MITCHELL

Film Editing

Q. I have exposed my first several rolls of film and would now like to arrange the scenes in their proper continuity. What equipment would you suggest?

A. A splicer and a rewinder are required. These may be had mounted upon a common base in the B & H Rewinder and Splicer. Or, if you want the convenience of the equipment used in professional film editing, get the B & H Film Editor, which provides splicer, two-way rewinder, and picture viewer all in one unit. See page 6, Christmas 1933 Filmo Topics.

Q. Does the new B&H Film Editor show the full area of the frame? Can the pictures be seen clearly in a well illuminated room?

A. Yes, the full picture area is projected onto a glass screen 1½ by 1½ inches in size. It is easily viewed under any ordinary light conditions.

Animated Cartoons

Q. Can animated cartoons be made in Kodacolor? If so, what is the procedure?

A. They can. The procedure is the same as in black and white work except that you must provide the extra illumination which Kodacolor requires. In making animated movies, the foremost caution to observe is that one and only one frame be exposed at a time. This is easily done by using half speed and exerting a quick slight tap on the starting button, although some prefer to have the camera equipped with a positive single shot exposure release which we have recently developed.

Macroscopic Movies

Q. How can I photograph small objects at very short distances, the necessary fields being from one-half to three inches wide?

A. To focus any of the regular Filmo lenses at such short distances, special lens extensions are necessary. A separate extension or adapter is usually required for each field. A reflex focusing device is available which permits viewing and focusing on the exact field covered and also serves as an extension. (Detailed data on special requirements on application to Technical Dept.)

Viewfinder

Q. Is anything available for the 70-D camera that will give a larger finder image of the picture area obtained with a telephoto lens? A. Yes—the Auxiliary Finder Unit which attaches beside the camera viewfinder and employs the matched viewfinder lenses available with each telephoto lens.

BELL & HOWELL ANNOUNCES THE

Filmo 8 Projector

A new 8mm. projector which shows clear, brilliant, steady movies on the largest of home screens

HERE it is—the new Bell & Howell Filmo 8 mm. Projector. It looks like a Filmo J 16 mm. Projector. And, film sizes considered, it performs like that finest of 16 mm. machines. It shows 8 mm. pictures as you'd never imagine they could be shown—clear, steady, and beautifully brilliant even on screens five and six feet wide.

It is easy to run... anyone can learn in a few minutes. It will give you a lifetime of dependable service... no Filmo has ever worn out! And your films, often irreplaceable, are entirely safe on the Filmo 8 because of its fully adequate film protective features.

The Filmo 8 Projector operates on 110-volt AC or DC. Threading the film takes but a moment, facilitated by large sprockets, progressively locking sprocket guards, and a pilot light. Then touch the starting switch, and your movies flash upon the screen, brilliantly illuminated by a most efficient direct lighting system employing a 300-watt lamp.

Stop the projector whenever you wish and for as long as you wish, to see any scene as a still picture. An automatic safety shutter protects the film from heat.

When the film has all run through, engage its end with the upper reel, press a lever, and the film will be rewound rapidly, automatically.

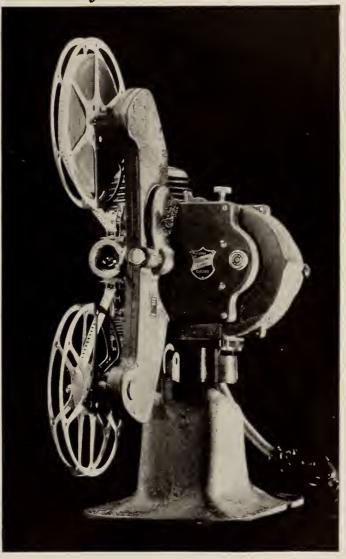
When you see the Filmo 8 Projector at your dealer's, notice that rigid, non-warping aluminum die castings form its frame. This is visible evidence of the ruggedness, the permanence, that characterize the machine throughout . . . of the fine construction which renders perfect service for a lifetime. Notice, too, that it is gear-driven. There are no chains or belts, inside or out.

The price? Only \$125, including carrying case.

Ask a nearby Filmo dealer to demonstrate and tell you more about this fine Filmo 8 mm. Projector, or write for further details.

BELL & HOWELL COMPANY, 1842 Larchmont Ave., Chicago; New York; Hollywood; London (B & H Co., Ltd.)

Established 1997



OTHER FEATURES OF THE

FILMO 8

Cooke 1-inch F 1.6 (unusually fast) projection lens. Manual framer for out-of-frame prints. Adequate cooling for efficient, economical use of the high-powered lamp. Convenient tilt.

Sprocket guards are opened and closed independently. Interlocking controls — correct operation assured. Pilot light. All wiring is concealed. Capacity — 200 feet of 8 mm, film—16 minutes.



1000-WATT FILMO

It's on the way—the most powerful 16 mm. projector yet produced. The New Filmo Model 130, especially designed for its purpose, delivers a flood of illumination adequate for the larger auditoriums. With its new optical system it provides 80% greater screen brilliance than 750-watt projectors—and does this with only a 331/3% lamp wattage increase! Fully adequate cooling is provided. Filmo Model 130 has a capacity of 1600 feet

of film, and may even be extended for two-hour programs. There have been few advances in 16 mm. projection equipment to equal that accomplished in this new Filmo Projector, which leads a remarkable invasion of 16 mm. film into that part of the non-theatrical field hitherto served only by 35 mm.

Complete details of the 1000-Watt Filmo Model 130 Projector will be released shortly.

Bell & Howell Company, 1842 Larchmont Avenue, Chicago, Ill. New York, Hollywood, London (B&H Co., Ltd.) Estab. 1907 EASE

PROFESSION.AL

BELL & HOWELL

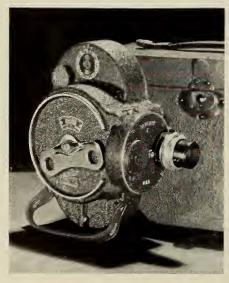
Personal Movie Cameras and Projectors



RII OVIES

Filmo 70-D Camera

The "professional" among 16 mm. cameras. Has seven film speeds (8 to 64), a turret which instantly positions any one of three lenses, and a variable area viewfinder. A critical focuser is optional. With Cooke 1-inch F 3.5 lens and carrying case, \$225. Focuser, \$25 extra.



Filmo 70-E Camera

A "speed" camera, regularly equipped with Cooke 1-inch F 1.5 lens which, with Kodacolor filter added, makes it also a color camera. Four film speeds: 8, 16, 24, and 64. Mechanism is identical with that of Filmo 70-D. Prices, including case: with F 1.5 lens, \$185; with Cooke 1-inch F 3.5 lens, \$150.

the gift that goes on giving

OR Christmas, you'll want to choose a gift that will continue, year after year, to bring deep-scated, genuine pleasure to your loved ones . . . a gift that will go on giving. Then what better choice could you make than a Filmo personal movie eamera?

Only once in a lifetime come the precious moments that one wants most to perpetuate in motion pietures. These rare moments cannot be entrusted to anything but the finest movie equipment . . . FILMO.

Filmo Cameras are designed and built to get the finest pictures under every photographic condition . . . and to give these professional results with amateur ease. They are built for a lifetime of the finest service . . . built by Bell & Howell Company. maker of professional einemachinery which figures in the production of practically every theater movic.

For all their superior picture results, for all their long lives of dependable service, Filmo Cameras cost but little more, and in some models even less,

than other movie cameras. Ask your dealer to show you the several Filmo Camera models.

Filmo 121 Camera

Magazine loading - slip in a 50-foot 16 mm. film magazine and it's ready. Cooke F 3.5 lens, instantly interchangeable. Two viewfinders — spyglass and reflecting. Built-in exposure chart. Two film speeds, 16 and 24, plus singleframe exposures. Size, only 21/4 by 31/5 by 51/4 inches. Weight, only 2 pounds 5 ounces. Price, \$67.50. Case



Filmo 75 Camera

Light, compact, handsome - an excellent family gift and an ideal "second" camera. Takes 100 feet of 16 mm. film. Cooke 20 mm. F 3.5 lens, instantly interchangeable with others: speed, telephoto, and Koda-color. The lowest priced quality 16 mm. camera . . . only \$59.50. Case, \$5.50.



New York, Hollywood, London (B & H Co., Ltd.)

BELL & HOWELL 1842 Larehmont Ave., Chicago

PERSONAL MOVIE CAMERAS

PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL

FILMO TOPICS

Published in the interests of personal motion picture makers and users by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

VOLUME 10

CHRISTMAS 1934

NUMBER 3



"HAIRY CHRISTMAS"... A hilariously hirsute idea for your

film record of the holiday homecoming

H. A. WILDE

GOD rest ye, Merry Gentlemen, may nothing ye dismay. With which jovial yuletide thought, let's wind up the old reliable Filmo and proceed with a film production that befits the spirit of the occasion. In other words, why not have some fun making a picture that will, in turn, provide a measure of good cheer and merriment throughout the year-and for many years to come. Anyhow, the annual psychological uplift dies out much too quickly after the bells and bottles have rung in the New Year, so a reel of Christmas comedy in every Filmo family ought to add something to the ebbing gaiety of nations.

You won't have any difficulty selecting your cast of characters in this production. Just cast everybody from Grandpa to the family pup. You'll want to shoot (on film, of course) every member of the family who has gathered for the Christmas dinner, so tell them that they won't get any turkey until they have done their bit of acting for your camera. And tell them also that each actor, in playing his bit, will provide a vast amount of entertainment for the rest of the cast, who will be permitted to look on if they are obedient and will promise to do just what you tell them. Rcmind them that a director has absolute power on the stage and can ban anyone who doesn't behave. Appoint the largest member of the group as your assistant director. Have him repeat your orders in a loud voice, just like a real assistant director. Real assistant directors always have powerful voices because it is their duty to keep the actors awake while the fourth assistant cameraman is straining the film through a color filter. A few technical explanations like this will keep your cast interested.

Since this is an interior set you will need plenty of light, so provide a sufficient number of photoflood bulbs if you haven't the standard photographic lighting equipment. Photoflood bulbs can be used very effectively in floor and table lamps, and





are perfectly safe provided you don't take hold of one while it is burning. (See the article on page 4 for more details on filming indoors.)

The only other preliminary is to acquire a collection of Santa Claus whiskers, and caps with attached hair, which may be rented from a costumer or purchased at a novelty store. They don't need to be good, high class whiskers. Just ordinary, cheap, frowsy whiskers will do. Get enough whisker and cap and hair sets to supply each member of your cast, male and female, young and old, with head and face adorument. And fix one set to fit the family dog.

Now, quiet please- this is the picture-

LOCATION, Your living room with Christmas tree surrounded by wrapped gifts,

CHARACTERS. Father, Mother, Grandma, Grandpa, Sonnyboy, Sister Sue, Uncle Phil, Aunt Emma, and other visiting relatives, villagers, and firemen.



Title. A Hairy Christmas at the Jones's (or whatever your name is)—1934

Scene 1. Close-up of Sonnyboy gazing with wide-eyed interest at—

Scene 2. Close-up of Uncle Phil's bald head as seen over the back of a chair.

Scene 3. Continuation of Scene 1. Sonnyboy chews on his thumb nail with thoughtful expression. Knits his brow and stares abstractedly into space as he concentrates. Ah! Revolving thought clicks into a groove of remembrance. An idea is the result—and a brilliant idea is always worth a practical test. With a purposeful expression, Sonnyboy exits.

Scene 4. Medium-shot showing Sonnyboy in bathroom. He drags the bathroom stool over to the washstand, climbs up and opens the toilet cabinet, reaches into the cabinet, and takes out a bottle with a shaker top. Gazes at the bottle for a moment.

Scene 5. Flash close-up of bottle showing some such label as "POLAR BEAR HAIR TONIC."

Scene 6. Continuation of Scene 4. Sonnyboy clambers down from stool and exits with bottle.

Scene 7. Short flash of Sonnyboy at entrance of living room. Rear view, registering the bottle held behind him as he peers cautiously around edge of door to note lay of things. Then he stealthily slides around door jamb into room.

Scene 8. Medium front view of Uncle

Phil, orally busy, settling the destiny of nations with appropriate gestures. Pan upward slightly to frame Sonnyboy as he cautiously rises behind Uncle Phil's chair, reaches over Uncle Phil's head, bottle in hand, and shakes a dash of Hair Tonic onto the bald area.

Now is the time for your assistant director to get in his snappiest work. He has a whisker, cap, and wig set in hand ready for quick application. As Sonnyboy's arm reaches the lowest point in the downward swing, which should not be too rapid, you



shout, "Hold it!", and stop the camera. Previously instruct your cast that when you shout "Hold it!", they are to freeze instantly in whatever position they find themselves at that moment. Any slight infraction of this rule can be taken care of in cutting the film. As you call the order, the assistant director jumps into action, claps the whiskers onto Uncle Phil's face and the wig onto his head, and backs quickly out of camera range. The moment he is out of range, start the camera and shout "Action!" This means that Uncle Phil is to continue his animated conversation and that Sonnyboy is to raise the bottle, register amazement, and dodge out of sight behind the chair.

Scene 9. The same procedure as Scene 8, but with another male character who has a bald spot or an area of thinning hair.

Scenes 10, 11, 12. Same action as Scene 8, with other male members of cast, with or without hair. Sonnyboy's reaction to the transformation should now be one of delight rather than of amazement.

Scene 13. Sonnyboy appears behind Aunt Emma's chair, looks down speculatively at Aunt Emma, who is busily knitting and chatting with someone offstage. He wonders if this magic will work on the feminine sex, decides to take a chance, and gives Aunt Emma's coiffure a dash of tonic. Same stop-and-go action as on

previous shots. Sonnyboy is surprised and pleased with his work.

Scenes 14, 15, 16, etc. Continue with the various members of your cast until you have portrayed the magic transformation on every relative or guest, ending with Sister Sue, and including the baby. Be sure to instruct everyone that they are not to show any indication of surprise after the whiskers are attached. Have them continue with their talking, knitting, reading, playing cards, wrapping Christmas packages, or whatever they are doing, just as though nothing extraordinary had happened. The hairy attachment will look funny, especially on the women, but it will appear more comical if they act seriously than if they try to be comedians.

Now everybody is Santa Claus, and you have a picture of all your holiday guests as they normally appear and as they look in the ridiculous make-up. Everyone has had a merry time looking on from the side lines. You can finish your production in one of several ways:

1. A few medium and close-up shots of the folks, in whiskers, presenting and receiving gifts.

A long-shot of the group at dinner.
 An exterior shot of the guests as they say farewell at the front door and depart, all adorned in Santa Claus whiskers.

But save a few feet for the final shot of the bewhiskered pup. The best angle will be determined by the amiability of the dog under the circumstances, and the amount of control you have over the animal. If you can't do anything else you can have someone hold his hind quarters behind a partly opened door while you shoot a close-up of his decorated forepart. As the hidden person pushes the dog halfway beyond the edge of the door, the animal will naturally look toward the camera with a more or less annoyed expression. Then, after the pup has tolerated the indignity for a sufficient photographic period, have the individual holding his rear end yank him suddenly back out of sight, and fade out.

May you have a Merry Movie Christmas and a Reel Happy New Year.



3

FILMO NEWS PICTORIAL

Below—The two Eyemo Cameras as they
appeared after the
huge stratosphere balloon came to carth.
One camera sustained
only a few minar dents
and scratches. Only
the head, lens, and
door of the other were
damaged



NATIONAL GEOGRAPHIC SOCIETY

In the gondola of the National Geographic Society— U.S. Army Air Corps stratosphere balloon, Captain Albert W. Stevens is seen winding a B&H Eyemo Camera, while the other of the two Eyemos used appears at the upper right



taking Kodacolor movies in Death Valley, California, with



Left—John Flory, 24-year-old Clevelander, who wrote, directed, and, with this Filmo Camera, photographed a depression camedy called "Mr. Motorhoat's Last Stand", His fine work led to a seven-year contract with Paramount, and Flory is now heing groomed for a director's post

Mr. & Mrs. Martin Johnson on location, praducing one of their popular motion pictures of Africa. The camera is a Bell & Howell, of which the Johnsons have a number. Some are the professional model, shown, and some are Eyemos



An example of the movie seenes which can easily be taken indoors with a minimum of lighting equipment. The diagram shows the arrangements

MANY of the scenes most desired for our home movie films can best (or only) be taken indoors. The movie maker who lets a now groundless mental hazard restrain him from filming indoors is needlessly restricting himself, and unnecessarily permitting his films to fall far short of being the complete family records that they should be.

True, there was a time not so long ago when indoor movie making did require powerful lights and plenty of them. But that is history now. Today you can easily, and with an additional investment of only a few dollars, film baby in his bath and in his play-pen, the children absorbed in their favorite indoor pastimes and at their parties, mother at her work and recreation, father's evenings with his hobby or his paper, friends who drop in, and all the other incidents of home life without which no family movie can be complete and fully satisfying. During the holiday season, particularly, there is an abundance of rare movie material to be recorded indoors.

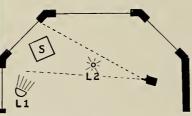
Merely load your Filmo Camera with

SHOOT THEM INDOORS

... for today you can easily take your movie subjects where you find them

supersensitive panchromatic film and, with your regular F 3.5 lens and a few 25c Mazda Photoflood bulbs in the cheapest of photographic reflectors, you can take beautiful close-ups indoors at night. A half-dozen of these inexpensive bulbs, in wall and ceiling fixtures, will illuminate the average room so brilliantly that, with a speed lens (Cooke F 1.3, F 1.5, or F 1.8) in your Filmo, you can film any subject anywhere in the room.

Of course there are many indoor scenes which can be taken during



daylight hours, and for these even less artificial light is needed. The illustration is an example of what can be done in the daytime with a minimum of lighting equipment. This picture was taken in mid-afternoon at normal speed, lens stop F 4.5, on supersensitive panchromatic film. The diagram shows the arrangements. The sun was bright, but was shaded from falling directly on the subject (S), so as to avoid shadows that the artificial lights could not sufficiently illuminate. L 1 was a Photoflood lamp in a 6-inch reflector, directed toward the subject from a low position about 3 feet away. This light produced the highlight on the right hand side of the face which helps to give roundness. L 2 was a Photoflood lamp in the ceiling fixture, with no reflector except the white ceiling. Being about 7 feet away, it did little but to provide additional illumination on the side away from the windows.

In taking movies indoors, there are two major considerations:

- 1. That there is sufficient light.
- 2. That the light sources are so placed as to illuminate the subject pleasingly.

The following table will give you a good working guide as to the amount of light

necucu.			
Lamp Distance	Number of Lamps		
from Subject	Needed for Lens Stop:		
	F 1.3	F 3.5	
4 feet	_	1	
6 fcet	1	3	
9 feet	2	5	
12 feet	4	8	

This table is based upon the lamps being in proper photographic reflectors, and supersensitive panchromatic film being used. Regular panchromatic film will require about twice as many lamps. If some daylight is admitted through windows, less lamps will be needed. Without photographic reflectors much of the illumination is lost, and as many as three or four times as many lamps may be needed.

Not more than five Photoflood lamps should be used on one circuit, or the line may be overloaded.

Thought should be given to the placing of the lights, as merely getting enough light on the subject will not necessarily produce a pleasing picture. Full front lighting gives flat pictures. Roundness and depth are obtained by placing the lights toward the sides of the subject, with stronger illumination on one side than on the other (accomplished with two lights, or by placing the light on one side closer than that on the other). A light above and behind the subject will provide backlighting, lining the subject with a highlight and thus making it stand out from the background. Most of the lights should be somewhat higher than the subject if a natural effect is desired.

Looking at the illuminated subject in the normal way, it may seem to have the proper relative illumination of highlights and shadows. But the film will not "see" details in the shadows so readily as will your eyes. So learn the trick of studying your lighting effects through half-closed eyes. That way you'll see the subject more nearly as the film will record it, and so be warned when further shifting of the lights is necessary.

(Continued on page eight)

Advice To Travel Filmers

How to take travel films which will be as interesting as the trip itself

WHEN you travel, you take your Filmo Camera along to record the things that interest you. You are not primarily concerned, as is the professional travel film producer, with filming things of interest to others, and so we have no desire, here, to tell you how to do that.

But, honestly now, do you consistently photograph effectively the things that interest you most? If your frank answer is "yes," then your films are bound to be interesting to you and to your friends as well. But if you've found, upon projecting them later, that your travel films fail to intrigue you, then it is very probable that you did *not* film the things that really interested you most, even though you thought at the time that you were choosing the interesting scenes.

There are three steps in making a worth while travel film:

- selecting interesting subject matter,
 photographing this subject matter effectively, and
- 3. arranging the resulting films into the most effective continuity. And while all these steps are important, the most vital is the first—selecting interesting subject matter.

While traveling, pause mentally from time to time and consider what really interests you. Broad general views of waterfronts, city streets, public buildings, fountains, and statues . . . yes. But, after stopping for a view of a Mediterranean city's market place, for instance, your interest draws you in among the shops and stalls, to examine the varied merchandise, perhaps to watch its fabrication, to witness the local customs in buying and selling, to study the native types represented there, and perhaps to buy a few articles. If such things interest you, don't put your Filmo away after a long shot from the threshold, so to speak, but let it look at the fascinating things and actions in closeup, just as you enjoy doing yourself. Do this, and your film will be interesting.

Remember constantly that you get up close to see better the things that interest you, and that only close-ups in your

film will make the pictures as interesting as the trip. In fact, only with a liberal sprinkling of these close-ups can your pictures tell the story of your trip, for these are the high spots.

Perhaps you're interested in the various types of humanity that populate the world. Use long shots to picture their background—to locate them. Step up for full-length views, to show their clothing, occupations, and diversions. And induce individuals to let you take real head and shoulder close-ups. If you're interested in animals, follow the same plan of long-shot, medium-shot, close-up. Let the supercilious camel's head fill the frame! Get up close to the proud Balinese fighting cock!

Show the masonary details of the Inca and pre-Inca ruins. Get a close-up of the primitive native plow as it turns the furrow. Show the hand as it taps the rubber tree, or weaves the rug, or plays the strange musical instrument. That's what we mean by letting your camera record what interests you and from as close by as your interest leads you.

If you have special interests, travel presents great opportunities to produce topical films which you'll never tire of projecting. Varied methods of transport, children of the world, agricultural methods, home life, native dances, water

supply systems, scenic beauty spots, specific industries from raw material to ultimate consumer, traffic control methods, animals, plants, waterfronts, ships, markets, religious ceremonies... there is no end of subject matter for topical films from which you may choose according to your personal inclinations.

Don Ramon Pniggros, a Catalan enthusiast, taking a close-up of a peasant of the Pyrences with his Filmo 70-D Camera

PHOTO B. COMELLA

In discussing subject interest, we've been unable to avoid touching upon step 2, effective photography. But beyond the time-honored and always useful device of long-shot, medium-shot, and close-up (with emphasis on the latter), there are other valuable matters of technique.

Variety always lends interest. Using a diversity of camera angles is one way to achieve variety. Broad views of city or countryside from an elevation . . . from a tall building, a tower, or a hill . . . are interesting. Low-camera (worm's eye) views of street traffic, of marchers, of caravans, are often appropriate. An occasional touch of comedy is another useful device for giving variety. Watch for suitable bits of comedy relief.

Titles can be kept down to the minimum by taking close-ups of signs for geographic orientation, scenes of a hand tearing or checking off days from a calendar to denote dates and lapse of time, and views of the town clock or even your watch to indicate the time of day.

Of course you should strive for technical perfection in your pictures. Even though you are skillful at judging exposures at home, light conditions abroad are often deceptive, and it will pay you to use a good exposure meter, such as the B & H Photometer. A Filmo user in the Philip-

(Continued on page eight)





Filmosound showing "House of Tomorrow" before 1300 Westinghouse dealers

MOVIES IN INDUSTRY AND EDUCATION

"House of Tomorrow" in Talkies

WESTINGHOUSE wanted to take the story of its "House of Tomorrow" to thousands of dealers. So Jam Handy produced a talkie, which was shown with ten B & H Filmosounds before dealers gathered in regional centers (see illustration). Now the same show is being presented locally before dealer prospect audiences.

Sound Films Sell World Cruise

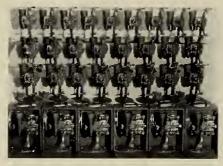
FINDING movies very successful in selling travel, many steamship companies have been extending their 16 mm. silent film libraries and encouraging greater use of their films. Now the Dollar Line has turned the additional power of sound movies to its sales use, and is describing its world cruises to prospects with Filmosound presentations of talkies by the Pathescope Company of America.

Typesetting Developments Explained with Talkies

MAKERS of heavy machinery, not readily transported for demonstrations, were among the first to apply movies to their sales problems. Now the Intertype Corporation has led its industry in employing talkies to explain recent developments in typesetting machines. A film by Loucks & Norling is shown to prospects with Filmosounds.

Magazine Dramatized with Talkies

McCALL'S MAGAZINE is ably dramatized in sound films which present the story of its fiction, departments, and pattern service to interested audiences. Showings are usually made in department



Some of the Filmo Projectors used in Buffalo, N.Y., public schools

stores, and sometimes in the palatial trailer bus illustrated here. B & H Filmosounds are used. Film by Loucks & Norling.

Blankets Sold with Talkies

KENWOOD MILLS have used movies for years to sell blankets. Now sound movies are taking over the job so well done in the past by silent and sound-ondisc pictures. Filmosounds are used to show talkies produced by Caravel Films.

Public Schools Instruct with Talkies

LONG accustomed to using silent motion pictures for visual instruction, public schools are now recognizing and adopting that even more powerful educational medium, the sound movie. Elgin, Illinois, high school was one of the first to acquire a Filmosound, which is used in classrooms, in the 1000-seat auditorium, and in Parent-Teacher Association meetings. Friday five-cent shows are paying for films and will in time pay for the Filmosound

Northbridge, Mass., high schools are also using a Filmosound for education and entertainment, as are the Harrington, Delaware, schools, the Pekin, Illinois, high school, and dozens of others.

Civic Functions Shown in Movies

AKRON, OHIO, high school students are given a vivid understanding of municipal service through 16 mm. silent films made by J. Ray Stine, principal of Central high school, and shown to the accompaniment of his lectures. One film traces Akron's water supply from the streams that feed the reservoir to the faucets in home, laundry, and factory. Another traces waste water from the drain pipe through the disposal system to the river.

Berea College Uses Movies

AT BEREA COLLEGE, where 90% of the 2500 students come from the southern mountain counties, motion pictures have proved to be an especially valuable educational aid, particularly to students who have had the most serious lack of reading material previous to enrollment. Films are used in classes on history, hygiene, nurse training, and other subjects. Filmo Projectors are employed.

Lip Movements Studied with Movies

PROFESSOR C. E. Parmenter and Mr. S. N. Trevino, Phonetics Laboratory, University of Chicago, purchased a Filmo 70-D Camera from Chicago Film Laboratory and are producing films which are used in studying lip reading. Similar work is conducted with marked success at Ohio State University.

Patrons entering McCall's trailer theater to see the talkie, "McCall's on Parade"





CHRISTMAS PARTY

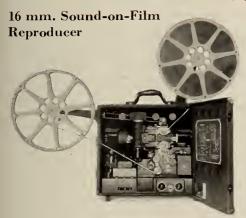
is the latest idea in Christmas Entertainment

You can rent a complete 16 mm. talking picture program for home, school, church, or club

ERE'S a suggestion that will make your Christmas party a success! Include a modern sound movie program in the entertainment you provide. It's easily arranged, and inexpensive, too. Merely go or write to the nearest Filmosound Rental Library branch (see the list below) and rent your talkies from the many available. There are rollicking cartoons, fine clean comedies, thrilling sport reels, interesting travelogs, informative natural history subjects, and selected episodes from favorite operas.

Your nearest Library branch will rent you a Filmosound Projector, if you haven't one, and will even supply an operator and a screen, if you wish. Make your reservations early, to be sure of getting the desired films.

BELL & HOWELL FILMOSOUND



THE B & H Filmosound presents 16 mm. talkies—for entertaining, educational, or commercial purposes—with true theater quality. The sound system gives a full range of undistorted volume, from a whisper to the volume required for a large auditorium. Uniform speed, vital to perfect sound quality, is assured by an electrically governed motor, power-driven sprockets on both sides of the sound drum, and a perfected theater-type mechanical filter. The Filmo picture projection unit guarantees brilliant, steady, flickerless pictures. Quickly set up, easy to use, economical to operate. Write for details.

FILMOSOUND RENTAL LIBRARY BRANCHES

Altoona, Pa.—Cohen's
Baltimore—Zepp Photo Supply Company
Chicago—Almer Coe & Company
Denver—The Home Movie Sales Agency
Detroit—Michigan Film Library
Hollywood—Bell & Howell Company
Milwankee—The Photoart House
Minneapolis—Auditorium Supply Co.
New York City—Willoughby Camera
Stores, Inc.

Omaha—J. G. Kretschmer & Co.
Philadelphia—Williams, Brown & Earle
Providence—Westcott, Slade & Balcom Co.
San Diego, Calif.—Howard E. Jope
San Francisco—Schwabacher-Frey Co.
Schenectady. N. Y.—J. T. & D. B. Lyon
Scattle—Mctropolitan Film Exchange
Tampa—Burgert Bros.
Topeka—The Hall Stationery Co.
Wilmington, Del.—Butler's, Inc.

BELL & HOWELL COMPANY

1842 Larelimont Avenue, Chicago

New York Hollywood

London (B&H Co., Ltd.)

Established 1907

NEW RELEASES

Wings Over the Andes. With the Shippee-Johnson Expedition to the Peruvian Andes, by airplane and on muleback. Discovery of the "Great Wall of Peru"; exploration of the "Valley of Volcanoes" and of the "Lost Valley of Colca"; flights over and into the volcanic craters of El Misti and Ubinas. A vitally interesting and informative talkie lecture which recalls the ancient glory of Peru. Lowell Thomas is the narrator. Three reels.

Who Killed Coek Robin? Tragedy stalks into joyous birdland, but Cock Robin returns to life again in this whimsical cartoon version of the old story. One reel.

Wrestling Swordfish. Close-ups of starfish, balloon fish, and a giant ray. An exciting wrestling match between fishermen and swordfish. One reel.

Pigskin Capers. Football as it has never been played before, in a delightful cartoon comedy. One reel,

A Brahmin's Daughter. Nov. 26. This condensed version of the opera "Lakme" is a triumph of excellent sound motion picture production. Esther Coombs sings the title role; Ettore Campana is the Brahmin High Priest. "The Bell Song" is featured. An Oriental ballet and a large ensemble of trained voices provide colorful backgrounds. Two reels.

Claney at the Bat. Dec. 3. A two-reel comedy of sand-lot baseball which strikes at the risibilities with unfailing exactness. Andy Clyde and Harry Gribbon are the stars.

Aladdin's Lamp. Dec. 10. The wonders of the original magic lamp are put to shame by the marvels conjured up in this one-reel cartoon comedy.

Walpurgis Night. Dec. 17. A spectacular, imaginative visualization of incidents from Goethe's "Faust"; of the legendary "witches' night," when evil spirits run rampant. Ettore Campana, basso, portrays Mephistopheles. Two reels.

Around the World. Dec. 24. A rollicking cartoon comedy which runs the full gamut of variety and novelty. One reel.

Upperent O'Brien. Dec. 31. Medicine show proprietor O'Brien (Harry Gribbon) has a clever, if crooked, trick for helping his fighter whip all comers until Andy Clyde, O'Brien's former manager, exposes his deceit. An excellent two-reel comedy.

..., and a long list of other travelogs, comedies, eartoons, operalogs, sport, and natural history films, recently released.

Advice to Travel Filmers

(Continued from page five)

pines, who took up movie making while in the United States, writes that when the light in Manila would suggest lens stop F 11, F 5.5 is actually required. When abroad, you cannot trust to your home-acquired experience.

To get natural action pictures of people you'll often need to shoot without their knowledge. The Prismatic Eye provides one successful way of doing this. Attached to the viewfinder eyepiece, this inexpensive accessory permits you to see your subject while facing and apparently shooting in another direction.

A telephoto lens is frequently needed to get those all-important close-ups, as it permits shooting from far enough away so as not to distract the subject from his natural actions and expressions.

Space limitations prevent our discussing travel film editing at length, and after all, the fundamentals of editing are contained in the foregoing suggestions. We've mentioned the desirable sequence of (1) sign to establish location, (2) long-shot to give the atmosphere and surroundings, (3) medium-shot to



for the CHILDREN'S CHRISTMAS PARTY

Here are three silent films that will "go over big" at the children's Christmas party. Order them now from your Filmo dealer.

Santa Claus. A cartoon movie story of Santa's activities on Christmas Eve. 16 mm., 100 feet, \$6. 8 mm., 50 feet, \$2.50.

Santa Claus' Toy Shop. Santa and his Brownie helpers preparing for Christmas. 16 mm., 100 feet, \$6. 8 mm., 50 feet, \$2.50.

Felix Trips Through Toyland. Felix the cartoon cat has marvelous adventures while rescuing a doll from a toyland villian. 16 mm., 400 feet, \$20. 8 mm., 200 feet, \$10.

Many other films especially suitable for your holiday entertainments are presented in a special Christmas film list, now available. Send for your copy.

BELL & HOWELL CO.

1842 Larchmont Ave., Chicago

show the place of the subject in this scheme of things and to picture action over a considerable area, and (4) close-up to gratify the curiosity about interesting details not clearly visible from more distant viewpoints. We've also mentioned the topical film, the sequences for which you'll undoubtedly have to separate, upon returning home, from your more general travel scenes.

Your aim in editing and titling should he to make the film fully self-explanatory, not only hecause it will thus be more comprehensible to your friends, but also because you may forget, as time passes, details essential to complete appreciation of the film.

Shoot Them Indoors

(Continued from page four)

Avoid letting rays direct from the lights, or reflected from window panes or mirrors, shine into the lens, for they will cause white flares on your pictures. When you can't shift the lights to avoid such reflections, shield them from the lens with some object *outside* the field of the camera. Opening a window or moving a mirror is the easiest way to eliminate reflections from these surfaces. You can see these "hot spots" through the camera viewfinder. Dispose of them before you shoot the scene.

Try your hand at indoor movie making this holiday season and you'll never again feel that movie making is solely an outdoor hobby.

Polar Expedition Using Eyemo

The scientific expedition "Pourquoi-Pas" which set out from France under the leader-ship of Commandant Charcot several months ago for the north pole and to explore the coasts of Greenland, is equipped with a B & H Eyemo 35 mm. hand camera and a full complement of Cooke lenses, B & H Tripod, etc.

Missing Equipment

THE equipment identified by the serial numbers listed below is missing, and has not been reported previously. Any information as to its location will be welcomed by the owners, who may be reached by addressing the Bell & Howell Company at Chicago, New York, Hollywood, or London, England, and stating the serial number of the missing unit which has come to your attention.

Filmo 70 Cameras

25,149 54,251 60,945, 70-D

Filmo Projectors

16,613 37,255 151,850 21,327

Questions and

Answers

Conducted by R. FAWN MITCHELL

Film Preservation

Q. What care would you recommend for films which I should like to preserve?

A. Keep them in humidor cans in winter, moistening the pads twice a month. Humidification is usually not necessary in summer. Store the films away from artificial heating outlets. It is desirable to clean films occasionally, depending upon how often they are used. The B & H Film Cleaner will be found ideal for this purpose. With this procedure, and exercising reasonable care, your films should last a lifetime. We offer a special film treatment to prolong film life.

Critical Focuser

Q. In using the Critical Focuser on my Filmo I find that the footage calibrations on some of the lenses do not conform with my visual settings. This is especially true of the short focal length lenses. Is anything wrong?

A. The difference is probably due to the depth of focus of the lenses. As long as it is possible to re-focus by scale and still have a sharp image on the ground glass, there is nothing wrong. A point to watch in using the Critical Focuser is to focus the eye on the grain of the ground glass and then focus the lens until the image is sharp. The human eye has so much accommodation that it is possible to set the eye to focus on an aerial image, thereby giving simulation of sharp focus without the lens being set as it should be.

X-Ray Movies

Q. How are X-Ray movies made?

A. Usually hy making a series of X-Ray plates and animating them one at a time, using, if necessary, drawings made by hand to supply intermediate stages of action. While it is true that some experimenters have been able to take X-Ray movies direct, these have been obtained only with quite expensive equipment and under considerable difficulty.

Night Pictures

Q. I want to take some night pictures outof-doors, using photoflares for illumination. What exposure is required?

A. The exact actinic value of a flare depends upon the reflective quality of the ground and surroundings. With snow on the ground a flare is much more effective than otherwise. Under average conditions, using panchromatic film, one flare 15 feet from the subject will be satisfactory for lens stop F 3.5. With supersensitive panchromatic film the flare can be as much as 20 feet away. A metallic reflector behind the flare helps considerably.

GIFTS for the movie maker

\$5 and LESS



REELS AND CANS

Hold 400 feet of 16 mm. film. Reels have self-threading hubs, film footage calibrations. Cans have humidor pads which tell when moistening is needed. Reel, 75c. Can, 75c. For 200 feet 8 mm. film, reel 50c, can soc.

LENS CLEANING KIT

Everything for the proper care of lenses. \$1.50.

COLOR FILTERS

Amber, Green, Red, and Neutral Density, to fit any Filmo Camera lens. \$2.50 to \$6.

REMOTE CONTROL

For Filmo 70 Cameras. Starts and stops camera from a distance, for wild life filming, or to let operator enter the picture, or for shots from difficult or dangerous locations. \$4.50.

DUPLICATOR

Screws into F 3.5 lens to give a double-image effect. \$4.50.

PRISMATIC EYE

Attaches to Filmo 70 viewfinder at eyepiece. Permits taking movies without subject's knowledge, while operator faces away from subject. \$5.

to \$10



FILTER SET

For Cooke 1-inch F 3.5 lens. Includes P-2x, P-4x, and graduated amber filters, interchangeable in a single mount. \$5.75.



BLOCK TITLE LETTERS

Set of 199 wood letters and numerals, each 2½ inches high, ½ inch thick, for title making. In light wood color, \$7.50. In red, green, or blue, \$13.50.

FOCUSING MICROSCOPE

For focusing any Filmo 70 or 75 Camera lens. \$9.

For the movie maker, you could scarcely select a more welcome gift than some long-wanted accessory. Here are Filmo accessory gift suggestions to suit any purse.



FILM SPLICER

New, greatly improved model. Splices 16 mm. silent or sound, and 8 mm. film. New automatic film shifter and retractile pilot pins facilitate splicing. Cement bottles clamped beneath new all-metal base -can't tip. Units being developed permit conversion into (1) Rewinder and Splicer and (2) complete Film Editor with picture viewer. Price, \$7.50; with dry scraper, \$10.

\$10 to \$20

FILM CLEANER

Attaches to any Filmo Projector, and removes dirt while the film is projected. Improves picture beauty and prolongs film life. \$10.

IRIS VIGNETTER

For producing circle-in and circle-out effects. Model A fits Cooke 1-inch F 3.5 lens; Model B fits Cooke F 1.8 lens. Each, \$10.50.

FILM STORAGE CASES

Covered in black fabric leather. Have humidifying pad. Case for eight 400-foot reels, \$10.50; for 16 reels, \$12.25; for 24 reels, \$14.

REWINDER-SPLICER

For editing 16 mm. silent or sound, and 8 mm. films. Geared rewinder, reel spindle and B&H splicer. Price, \$11; with dry scraper, \$13.50.

TITLE BOARD

Titles are set up in white celluloid letters on the black, grooved background. Withsetof200letters, \$12.25.

LENS MODIFIER

A distorting lens which attaches to the Cooke 1-inch F 3.5 lens to make the subject appear enormously elongated, or short and squat, at the operator's choice.\$13.50.



KODACOLOR FILTER

Slipped onto a Cooke 1-inch F 1.5 or F 1.8 lens, this filter permits taking natural color movies with any

Filmo 70 Camera. New type, adjustable for light conditions. \$14.

PROJECTION SCREENS

Essential to clear, bright pictures Roller wall screens from \$8 up. Screens which roll into box case, \$15 up. Sizes and styles for every need, all with the finest projection surface.



PHOTOMETER

The only exposure meter which takes reading on the important part of the subject, while you see the subject. Model A for Filmos, Model B for "still" cameras. \$15 each. Case, \$2.50.

\$20 to \$35

EXTRA-BRIGHT SCREENS

Best for both Kodacolor and monochrome projection. Metallic silvered surface on sheet aluminum base, mounted in a rigid, neat frame. 20x27 inches, \$21.30x40 inches, \$39.



ENLARGER

Makes album prints from 16 mm. movie films. Used with any Filmo Projector. \$28.50.



FILM EDITOR

Complete 16 mm. film editing device, including B&H splicer, two-way rewinder, and a film viewing unit which shows illuminated pictures on a ground glass screen. Price, \$33; with dry scraper, \$35.50.

\$35 and MORE

CHARACTER TITLE WRITER

Complete, convenient unit for filming titles with any Filmo 70 Camera. Provides camera mount, lights, and title card holder. Insures correct centering and alignment. With pen, ink, cards, and case, \$36.

KODACOLOR **PROJECTION LENS**

Adapts any Filmo 16 mm. Projector for showing Kodacolor films. New improved three-color filter which passes more light than previous filter. \$35.

ALL-METAL TRIPOD

Light, compact, rigid. Insures rock-steady pictures. Smoothly operating head allows combined or independent panoraming and tilting movements. \$36. Leather case,



WIDE-ANGLE LENS

Cooke 15 mm. F 2.5 for Filmo 70 Cameras. Takes in an area 40% wider, 40% higher, than regular 1-inch lens. Invaluable in-

doors, on shipdeck, in narrow streets, in the mountains. Price, \$45; in focusing mount, \$55.



TELEPHOTO LENSES

For close-ups of distant or very small subjects. Cooke 2-inch F 3.5, \$55. 3-inch F 4, \$57.50. 4-inch F 4.5, \$55. 6-inch F 5.5, \$60.



SPEED LENSES

For movies indoors, or whereever the light is weak, and with Kodacolor filter, \$14) for color

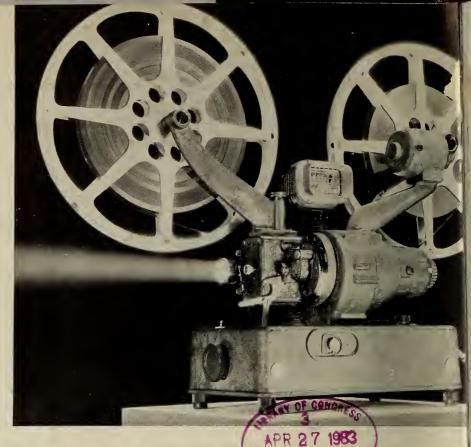
movies. Cooke 1-inch F 1.3, fastest lens available, \$75. 1-inch F 1.5, ideal "combination lens" for Kodacolor and monochrome, \$60. 1-inch F 1.8, best for Kodacolor, \$60.

For full details, see a nearby Filmo dealer or write direct to Bell & Howell Company.

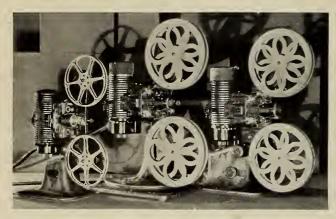
BELL & HOWELL

Bell & Howell Company, 1842 Larehmont Avenue, Chicago; New York, Hollywood, London (B & H Co., Ltd.) Estab. 1907





1. 1000-WATT-MODEL 130 (Allustrated above)



FILMO 8 MM. PROJECTOR

(Left above). Shows brilliant, steady, flickerless 8 mm. movies up to 6 feet wide. 300-watt lamp. Gear-driven—no chains or belts. Power rewind. Pilot light. Stops for still pictures. Fast Cooke F 1.6 lens. Manual framer. Full film protection. B&H precision mechanism in rigid, non-warping, die-cast aluminum housing.

FILMO R PROJECTORS

(Center). Three moderately priced models—500-watt, 750-watt, and 750-watt with variable resistance and voltmeter. Have power rewind, manual framer. May be run backward and stopped for still projection. Superior Filmo design and construction throughout.

FILMO JS PROJECTOR

(Right). 750-watt lamp, variable resistance, and illuminated voltmeter. Fully gear-driven—no chains or belts. Power rewind, manual framer, fast Cooke F 1.65 lens, and pilot light.

THE new Filmo 1000-watt 16 mm. Projector marks a major advance in 16 mm. equipment, extending the use of safe, economical 16 mm. film into large auditoriums where heretofore only 35 mm. film would serve. So efficient is its new optical system that 80% greater screen brilliance is achieved than with 750-watt projectors, although the lamp wattage increase is but 33 1/3%. A new cooling system keeps the 1000-watt lamp within its maximum safe temperature. 1600-foot film reels are accommodated—a one-hour show without interruption! Features include new streamline base giving low center of gravity, and completely new arrangement of controls. Complete details upon request. Price, \$385.

2. 75 '-WATT-MODEL 129

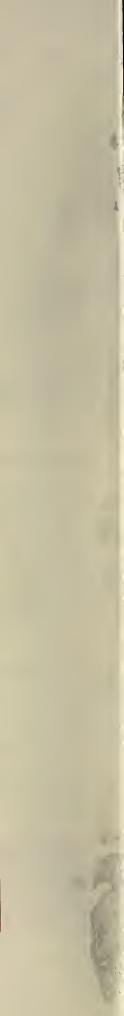
Similar in gent appearance to the 1000-watt model pictured above, the new Filh. 750-watt Model 129 Projector also has a new, low, streamline base and a 16 mm. film capacity of 1600 feet. It is a moderately priced projector for use in home, school, and wherever full 1000-watt illumination is not required. Details soon to be available.

BELL & HOWELL COMPANY

1842 Larchmont Ave., Chicago, Illinois; New York; Hollywood; London (B&H Co., Ltd.) Established 1907

BELL & FILMO
PERSONAL MOVIE PROJECTORS





ELL & HOWELL

ILMO TOPICS

RELL & HOWELL 30 For FIL MOPAN Panchromatic 8 mm. Safety Armenials

SUMMER 1935

Develop Believe

Employen V.

THE CAMERAS

For MOVIES in COLOR

Choose one of these 16mm. FILMOS

The Filmo 121 Camera

Magazine Loading . . . Feather Weight . . . Invitingly Small

Loaded in an instant . . . No threading . . . Just insert the film cartridge . . . Change from color film to black and white or vice versa any time, anywhere . . . Takes any Filmo 75 Camera lens . . . With adapter (\$2.50) takes any Filmo 70 Camera lens . . . Oscillating shutter gives absolutely uniform exposure over entire frame . . . Two speeds: 16 and 24 . . . Single-frame exposures . . . Two viewfinders: spyglass and waist-level . . . Built-in exposure chart . . . Small: only 2½ x 3½ x 5¼ inches . . . Light: weighs only 2 lbs. 5 oz. Write for detailed literature. Price, with Cooke 20 mm. F 3.5 universal focus lens, \$67.50; leather carrying case, \$7.50.

Filmo Cameras are as superior for color photography as they are for black and white. Their fine design and their precise, sturdy construction are essential to fine color results. Their Taylor-Hobson lenses are noted for their sharp definition and for their ability to focus all colors at the same plane.



The Filmo 70-D Camera

3-Lens Turret . . . 7 Film Speeds . . . Variable Viewfinder



Built like a fine watch, 216° shutter opening, giving 1-27th second exposure at 16-speed. Seven film speeds-8-12-16-24-32-48-64. Three-lens turret, variable spyglass viewfinder giving (instantly) field areas of six different focal length lenses. Critical focuser (optional). Capacity—100 feet of 16 mm. film. There is no finer or more versatile 16 mm. movie camera for general use. Many attachments available (including motor and external magazine) for semi-professional work. Price, \$225 up, with Sesamee-locked carrying case.

The Filmo 75 Camera

The lowest-priced 100-foot camera of comparable quality

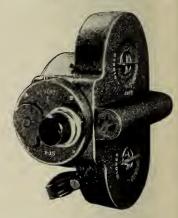
Now priced at \$59.50, the slender and patrician Filmo 75, built fully to Bell & Howell standards, establishes a new record for value in the 16 mm field. Measures only 1% x 4 x 8¾ inches. Full 100-ft. film capacity. 20 mm. F 3.5 Cooke lens, interchangeable with speed and telephoto lenses. Spyglass viewfinder, adjustable for field area of lens. Winds like watch with ratchet key. Covered in pebble-grain or filigree fabric leather. Leather carrying case, \$5.50.



The Filmo 70-E Camera

Four Film Speeds . . Lightning Fast Lens . . Moderate Price

Four film speeds-8 to 64 frames Regularly equipped with a Taylor-Hobson 1-inch F 1.5 speed lens, making possible perfectly exposed movies under the most adverse lighting conditions. The F 1.5 lens is instantly interchangeable with any Filmo 70 telephoto or wide angle lens. Basic operating mechanism is the same as that in the Filmo 70-D Camera-precise, skillfully designed and manufactured. An efficient utility camera where turret head and variable viewfinder are not required. Price, with case, \$185; with F 3.5 lens, \$150.



New Filmo 16mm. Camera Catalog Out! Write for FREE copy!

Containing detailed technical data on every Filmo 16 mm. Camera, this new catalog is a source of interesting and instructive information you'll appreciate. Send for your *free* copy today.



BELL & HOWELL COMPANY

1842 Larchmont Ave., Chicago; New York; Hollywood; London

BELL & HOWELL

FILMO TOPICS

Published in the interests of personal motion picture makers and users by the Bell & Howell Company, Chicago

EDWIN A. REEVE . Editor

VOLUME II

SUMMER 1935

NUMBER I



FEATURES: Extremely low operating cost. Smallest and lightest of movie cameras. Simplified loading—no sprockets to thread, no loops to form. 12½ mm. F 2.5 lens, instantly interchangeable. Four film speeds: 8, 16, 24, and 32. Matched with the Filmo Eight Projector to yield rock-steady pictures

EIT 15 1

new FILMO STRAIGHT EIGHT

HERE'S a camera with which you can take all the movies you want to—its film costs so little. The Filmo Straight Eight actually makes the taking of movies as inexpensive as taking snapshots!

This economical movie making is easy, too, in every respect. The camera is so small and light that you can conveniently carry it everywhere. It weighs only 1½ pounds, and measures only 1¾ by 3 by 5 inches.

Simple . . . Error-Proof

It is as simple to use as it is easy to carry. In its design, every possible provision has been made to insure correct use and to make incorrect use difficult or impossible. The following points are typical of the new 8 mm. camera's error-proof design, and of its many provisions to simplify loading and use.

1. Gate. When the hinged camera door is opened, the film gate springs open, ready to receive the film. After

threading, the gate is closed automatically by the shutting of the camera door.

- 2. Footage Dial. When 30 feet of film have been exposed, the footage dial is automatically reset. As the dial is in-operative when the camera door is open, it is always ready-set for the next loading, and is never set by hand.
- 3. Loading. There are no sprockets to thread, and no film loops to form. There is only one way—the correct way—by which the spools can be placed onto the spindles. Loading takes only a moment.
- 4. Winding Key is permanently attached —can't be lost.
- 5. Exposure Calculator is built into the camera's side.
- 6. An audible signal tells when all the film has been exposed.
- 7. No Lubrication is required, except that done once a year at the B & H factory or branches. This service is given free for three years.

A Bell & Howell Precision Camera

More than one capable movie maker, experienced in using 16 mm. or 35 mm. equipment, has, after seeing a demonstration of the results achieved with the Filmo Straight Eight Camera, B & H Filmopan film, and the Filmo Eight Projector, admitted that he "came to jeer and remained to cheer." Because this is precision equipment, and because the film is especially made to meet 8 mm. requirements, Filmo Eight movies are unbelievably brilliant, clear, and sharp... fully satisfactory to the most critical for projection up to five or six feet wide.

Into the B & H 8 mm. camera and projector have gone the same scientific design, the same fine materials and workmanship, that characterize Filmo 16 mm. and B & H professional equipment. For instance, the housings of both 8 mm. camera and projector are sturdy aluminum-alloy die-castings, accurately machined. Filmo 8 mm. equipment is backed by the same liberal guarantee as applies to Filmo 16 mm. cameras and projectors.

Versatility for Those Who Want It

The Filmo Straight Eight Camera, while permitting its user to reduce his movie making to the simplest bare necessities of manipulation if he wishes, also provides the advanced operator with the versatility that he requires for meeting various photographic conditions.

There are four film speeds—8, 16, (normal) 24, and 32 frames per second. 8-speed doubles the shutter's open time, and so is useful under weak light. 24-and 32-speeds give a degree of slow motion, and are useful for panoramic shots or scenes from moving vehicles or of swiftly moving objects.

The standard 12½ mm. F 2.5 anastigmat



B&H Filmopan costs so little that you can take all the movies you want to

lens in universal focus mount is fast enough for indoor use under artificial light. It is instantly interchangeable with extra lenses, merely by compressing two lock-releasing pins. 1-inch F 2.7, 1½-inch F 3.5, and other extra lenses are to be available. Those familiar with 16 mm. cameras should remember that a lens on an 8 mm. camera has the magnifying power of one of twice its focal length on a 16 mm. camera.

The viewfinder field is matched with extra 1-inch and 1½-inch lenses by swinging hinged masks over the viewfinder objective. These masks permit seeing the area outside as well as inside the telephoto lens fields.



So small and light that you can conveniently carry it anywhere

The Importance of "Matched" Camera and Projector

Certain dimension tolerances must, of course, be permitted in the manufacture and perforation of film. Although these tolerances are minute, the vast magnification involved in projecting 8 mm. film (about 175,000 times the film area when shown 6 feet wide) gives these necessary tolerances the power to detract noticeably from the steadiness of the screen image.

Therefore, rock-steady screen pictures can be obtained from 8 mm. film only by having the camera which takes them and the projector which shows them matched, one with the other, as to the method of film registration at the aperture.

This all-important matching is fully accomplished in the Filmo 8 mm. Camera and Projector. Both use the same film perforation for the pull-down, and the same film edge for side guiding. In both, the side guides and the side tension springs are of the same size and location. These provisions minimize any unsteadiness caused by film perforation and film width variations.

So, you see, there is a sound mechanical reason, aside from the quality and performance of each unit, why anyone buying an 8 mm. outfit should select both camera and projector from the Filmo line. We believe that you'll enjoy seeing this equipment at your dealers.



Easily, quickly loaded. No sprockets to thread



Lens is quickly interchangeable

SUMMER 1935

THE ROMANCE OF MODERN PIONEERING RECORDED WITH FILMO

■T IS popularly supposed that the day of pioneering, in the romantic sense, is over, that it passed with the covered wagon and the opening up of the West. But pioneering is still going on as intensively and as romantically as ever before, especially in sub-Arctic Canada. The spirit of the pioneers themselves remains the same; it is only the methods that have changed. The covered wagon, of course, has been replaced by the airplane, the tractor, and the power boat; and the gold pan of Old California and of the Klondike has been superseded by the diamond drill.

A fascinating sidelight on all this is that while the activities and adventures of the old-timers could be only vaguely recorded for posterity in drawings, engravings, and daguerrotypes, those of the modern pioneers can be vividly and forever preserved through the magic of the motion picture camera.

More than two thousand miles farther north than Chicago lies Great Bear Lake, bisected by the Arctic Circle, the fourth largest lake in North America. Until a few years ago it was frequented only by a few Indians and was almost unknown to science, although various mineral deposits had been reported.

In 1930 a prospector named Gilbert LaBine, aloft in a plane, descried a peculiar black-rock formation. Other prospectors had ignored it; he had the advantage of having studied pitchblende. He landed . . . and staked Canada's first radium mine, at Great Bear Lake. LaBine's pitchblende proved high not only in radium content—higher by far than that of the Belgian Congo — but almost fabulously rich in silver.

1. Launehing a northward-bound stern wheel vessel at Fort Smith.
2. A Diesel-engined tug pushing a freight barge on the Mackenzie River. 3. The first power boat of its size ever to reach sub-Arctic Great Bear Lake triumphantly approaches one of the mining camps there.
4. A silver vein in a Great Bear Lake mine.

RICHARD FINNIE



Richard Finnie, F. R. G. S.

Attracted by LaBine's "Eldorado," scores of men were soon scouring the neighboring countryside from the air, by canoe, and on foot, and they staked hundreds of claims. The following year camps were established, trenches were dug, shafts were sunk. A settlement was formed. In 1934 more than 300 white men, some of them with their wives and children, were living on the shores of sub-Arctic Great Bear Lake. They were needing more and more machinery and other supplies. And accumulations of rich ore that had been mined were awaiting shipment south.

In Canadian cities skeptics kept saying, "Oh, there may be some mineral wealth around Great Bear Lake, but it's too remote and inaccessible: it's a thousand miles or more north of Edmonton, the most northerly city in the Dominion, and you can't take supplies up there nor the minerals out, except, perhaps, by air, and that's too expensive."

Many of these skeptics had never heard of the Mackenzie River system, or, if they had, they assumed it to be frozen nearly all the year round and not navigable. Connected with Edmonton by a 300-mile railway, the immense Mackenzie system flows northward two thousand miles and empties into the Polar Sea;



and one of the river's tributaries flows out of Great Bear Lake.

The venerable Hudson's Bay Company and the more recently formed Northern Transportation Company were farsighted and ambitious. They felt that Great Bear Lake's transportation problem was by no means insoluble. Airplanes were indispensable, surely, but a preponderance of the freight could be conveyed by water. "Boats are needed," they said, "plenty of power boats and barges, properly constructed to cope with swift and shallow water." Plans were made.

A student of the Far North who on five expeditions had already covered most of Canada's Arctic and sub-Arctic regions, I became interested in this new enterprise of modern pioneering and decided to make a general survey of it.

An important part of my equipment would be a motion picture camera. On previous expeditions I had shot a total of more than 25,000 feet of film with Bell & Howell Eyemo Cameras; they had served me faithfully despite hard usage and under all conditions of weather; even at a temperature of 45 degrees below zero my Eyemos had purred steadily. But then for the most part I had been traveling on ships or had had a permanent base where almost unlimited reserves of 35 mm. film could be kept.

Things would be different now. In order to cover this whole panorama of modern pioneering it would be imperative that I encumber myself with an absolute minimum of baggage, to be ever prepared to transfer from boat to airplane, from airplane to boat, or to walk. I estimated that I would require at least five thousand feet of film to tell the story if a 35 mm. camera were to be used. Owing to the combined weight and bulk of camera and film this was out of the question.

Reluctantly, then, and with misgivings,

I pondered 16 mm. equipment. I had hitherto scorned it as amateurish, incapable of producing finished, workmanlike results. But there was no alternative under the circumstances. Lightness and compactness were prime requisites.

And so, in June, 1934, I left Edmonton carrying a Filmo tripod, a Filmo 70-D Camera with 1-inch F 3.5, 1-inch F 1.5, and 4-inch F 4.5 lenses on its turret head, and 2,500 feet of 16 mm. reversal film. In 16 mm., therefore, I had the equivalent of 6,250 feet of standard film—and it was a very great deal lighter and more compact.

Spending a fortnight at Fort Smith, the gateway to Canada's Northwest Territories, where massive argosies were being constructed for the invasion of the Last Great Frontiers, I exposed several hundred feet of film and sent the rolls to Edmonton by airplane. Thence they were forwarded to the Bell & Howell factory

(Continued on page ten)



HERE'S a scenario idea for your vacation trip. Some things which happen on such trips are pleasant, some unpleasant. Ordinarily the pleasing events are filmed, and the unpleasant details are not—because they are unexpected, and because no one is then in a state of mind conducive to photography. Nevertheless, these less pleasant happenings are excellent material for future amusement. The discomforts of an overloaded automobile on a hot day, fisherman's bad luck, or the

A SUMMER VACATION SCENARIO

H. A. WILDE

muddy, wriggler-infested water from the long-unused cottage pump are not at all amusing at the time, but they are decidedly laugh-provoking when re-lived on the movie screen after time has dimmed the irritation.

The specific suggestions made here may not apply to your case, but given this basic plan you can add, delete, and change individual episodes or character bits according to opportunity

and film footage available.

Let's give our production the title "HAPPY HOLIDAY," which may be made by painting the words on the car window with powdered chalk mixed in water. During the shot, spray the top and side of the car with rain (from a hose) so that the title gradually washes away. Shoot this from an angle about level with the top of the window, aiming slightly downward and toward the back seat so

that there is a dark background unbroken by the rear or far-side windows. Mother, surrounded by baggage, should be vaguely visible on the rear seat. Rock the car irregularly during the shot. The effect desired is that of the car bumping along a country road in a rain storm. Fade out.

Scene 1. Fade in. The departure. Medium shot of car, with family and baggage at side. Father is striving to load the bags, bundles, and assorted equipment in some compact manner that will leave a few square inches of space for the human cargo. Mother is supervising. Sister Emily is assisting by attempting to maneuver her bag, tennis racket, and hat box on top of everything else. Brother Bill is in the front seat monkeying with the gear lever. Packing doesn't interest him. Mike dashes about excitedly, getting in and out of the car as Father gets in and out.

Scene 2. Close-up through front right

door of car. Low angle, showing lower part of Bill. His feet are pushing brake and clutch pedals. Movement stops for a few moments, then right foot moves over and tentatively touches the starter pedal, then gives the pedal a quick push.

Scene 3. Medium close-up of Father half in the car with large suit case. Mother leaning over Father's back, peering inside. The car jerks forward and Mother grabs Father as he and the suitcase roll out on the ground. Mother steps over Father, opens front door, and yanks Bill out. Fade out.

Scene 4. Fade in to interior shot on the road. This will require a bit of angle study, but on most cars it can be accomplished by lashing the camera tripod outside, with legs closed, to the front door hinges and windshield post, with the lens pointing diagonally back, through the open window, toward the rear seat. The action, as seen over the back of the front seat, registers Emily and Mother rearranging a collection of coats, sweaters, robes, and bundles while Mike dashes back and forth between right, left, and rear windows. If desired, several bits for future cut-ins can be shot en route from this camera angle-eating lunch, Mother trying to put on her coat in the midst of unstable luggage, or the business of pouring a drink out of a thermos bottle as the car bounds over a bump. Cut or lap dissolve to-

Scene 5. At the cross roads. Medium shot of Father talking to native who leans in friendly fashion on car window ledge. Camera angle from left front of car, toward rear window, to frame upper part of native and Father's head; Mother and Emily in rear, leaning forward. Animated conversation. Native points to every point of compass, indicating turns, twists, up and down hill, crossroads and every other gesture that can be thought of. Father, in dazed fashion, follows the gestures with his eyes. Mother interrupts, tries to repeat directions, gets them wrong, and is carnestly corrected by native, with elaborations. Father finally hands native a cigar, grins, waves farewell in superlatively merry tempo. Native strikes match and lights cigar as car starts.

Scene 6. Medium close-up of native (from waist up) puffing as cigar is lighted, and gazing down road after car. Takes several long puffs after tossing match aside. Looks a bit disconcerted, then displeased. Removes cigar, looks at

it, smells it appraisingly. Throws cigar away, takes old pipe out of vest or shirt pocket, tamps down the "leavings" with little finger and lights it. Turns away.

Scene 7. Shot from interior of car, forward through windshield. Show hood and radiator cap. Car going over the worst road in America. Front of car bouncing up and down and swinging toward rocks and trees, turning just as crash is imminent. Shoot at 12 or 8 speed.

Scene 8. Close-up of Bill hanging out of window, delighted with the bouncing sensation and the thrill of just missing things. Lash closed tripod to rear door hinges, lens pointing forward.

Scene 9. From same angle as Scene 4. Mother and Emily and luggage being storm-tossed in the rear seat. Mother protesting volubly. Mike in state of frenzy.

Scene 10. Same as Scene 7, continued. Fade out.

TITLE. THREE HOURS LATER.

Scene 11. Fade in. The arrival. A weary and disheveled family slowly unfold and disembark in front of a cottage. Everyone stretches and eyes the "cottage-in-the-wilderness." Short panorama of rear view of family as they get out, move a few steps to right, and stop to stretch and look around.

Scene 12. Close-up of Mike between Father's legs. Ears suddenly perk up and he gazes intently at something. Family in same position as Scene 11, but only feet registering.

Scene 13. Medium close-up to long follow shot of Mike leaving premises in great haste, barking and ears up.

Scene 14. Close-up of Bill's face. He looks around in casual fashion. Sees something of interest, registers delight.

Scene 15. Long shot of lake and small dock, boat in foreground.

Scene 16. Long shot of Bill running past cottage to lake, out on dock, and into boat.

Scene 17. Flash of Father, Mother, and Emily entering door of cottage loaded with baggage. Mother issuing orders as usual. Fade out.

Scene 18. The first morning. Shoot when

sun is fairly low in either east or west so that long shadows suggest morning. Father emerges from cottage door, in pyjamas, looks around while registering pleasure, takes a long breath, and indulges in a couple of forced calisthenics. He hears a call and turns away as he answers.

Scene 19. Mother at pump, beckening and calling Father. He enters and, obeying her gesture, looks into bucket hanging on pump spout.

Scene 20. Close-up of bucket of water and pump spout. Water is black. As Father gives an experimental pump a gob of water and mud plops out of spout. Easily arranged by filling bucket with muddy water and stuffing a handful of mud up the spout.

Scene 21. Medium close-up of Father pumping energetically. Low angle shot. Lap dissolve or fade out and fade in to—

Scene 22. Clock face. Hands turn from 8:30 to 9:30. Lap dissolve or fade to—

Scene 23. Same as Scene 21. Father pumping more and more slowly. Very weary. Stops. Examines water in bucket. Decides it will do. Takes bucket from pump spout. Fade out.

Scene 24. Fade in. Mother on porch, in swing or rocker, contentedly reading. Lays down magazine and looks out over lake.

Scene 25. Long shot. Emily and Bill in bathing suits, playing with dog in water near dock.

Scene 26. Close-up of Bill with leach or crawfish.

Scene 27. A scenic view of lake through pine branches.

Scene 28. Long shot of Father in boat, fishing.

Scene 29. Medium close-up of Scene 28. Fade out.

Scene 30. Long shot of Father rowing toward camera. Dock in foreground. Boat approaches dock as rest of family goes out on dock and looks expectant. Mother wears apron and carries pan and knife.

Scene 31. Modern close-up of group on dock as Father rows up and bangs into (Continued on page twelve)

FILMO



PHOTO BY J. G. KRETCHMER

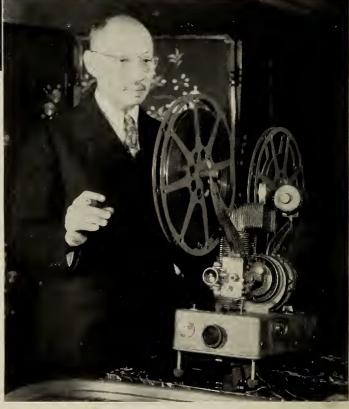
Dr. Bert L. Hooper, Lincoln, Nebraska, noted for his work in prosthetic dentistry, recording the actions of the industrious bee in the garden of his friend, banker George Holmes. Both Dr. Hooper and Mr. Holmes use Filmo 70-D Cameras



Captain Albert W. Stevens, commander of the National Geographie Society—Army Air Corps stratosphere expedition, in the gondola in which he and Captain Orvil A. Anderson will ascend into the stratosphere. The B&H Eyemo Camera which Captain Stevens is holding is to be used to take movies of the receding earth, the balloon unfolding above, and other seenes of interest. It will be operated by hand, through the glass portholes of the gondola



Students at Northwestern University, Evanston, Ill., filming a movie, "Murder by Proxy," which was recently completed and shown to student audiences. Fred Niemann is at the Filmo, Willard Randall is directing, and Tom Carmody, as the mysterious murderer, is strangling Dr. Oliver Lee, Professor of Astronomy.



H. R. II. Prince Purachatra, brother of the recently abdicated King of Siam, visited the Bell & llowell factory in Chicago in June and bought the 1000-watt Filmo Auditorium Projector with which he is shown above. The Prince has used Filmos for many years

NEWS PICTORIAL ...



E. J. Both, Chicago, using his Filmo 75 Camera to record the seenic beauties of Lake Louise



Commander G. O. Noville, in his hut at Little America last July, is seen defrosting the lenses on his battery of Bell & Howell Cameras, which consisted of two 16 mm. Filmo 70-Ds and one 35 mm. Eyemo. The outdoor temperature at the time was 64° below zero. Commander Noville is now lecturing to the accompaniment of his motion pictures of the second Byrd Antarctic Expedition





WM. LA VARRE FROM GENDREAU, N. Y.

Members of Wm. LaVarre's Brazilian-Guiaua Expedition filming Kaieteur Falls in British Guiana, using hoth Bell & Howell Professional and Filmo 16 mm. Cameras. The Falls are five times higher than Niagara

Left—Julien Bryan, traveler, cinematographer, and lecturer, making scenes of Siherian home life with his B&Il Eyemo Camera. Undoubtedly many Filma Topics readers have seen Mr. Bryan's Eyemomade films at his lectures and in the sequence on Russia in the June "The March of Time" newsreel

George Moriarty (eenter), who wrote the script and supervised the production of "Play Ball", using a B&H Filmosound to show the talkie to the Washington, D.C., Optimist Club.

WASHINGTON HERALD PHOTO



MOVIES IN INDUSTRY .. EDUCATION .. MEDICINE ..

Baseball-Fisher Body Tie-up

PLAY BALL," a 16 mm. sound movie which Judge Kenesaw Mountain Landis, "Czar" of baseball, describes as "an animated textbook of the national pastime," has been produced by the American League of Professional Baseball in cooperation with the Fisher Body Division of General Motors, and is now being shown to schools, colleges, clubs, and other business, social, and educational institutions. The film depicts the evolution of the game over the past 100 years, and then takes its audience behind the scenes of big league baseball, instructing in the fundamentals of batting, pitching, catching, fielding, and base running as demonstrated by the stars of the American League. Fisher Body has a "flying squadron" of 24 men who show the film with B & H Filmosounds.

Pontiac Combines Entertainment with Sales Films

TO AID in recruiting audiences for its 16 mm. automobile sales sound film, Pontiac "sweetens" its programs with a reel or two of travel or adventure talkies, or sometimes with a cartoon or a comedy. "Wrestling Swordfish" and "Man-eating Sharks," both from the B & H Filmosound Rental Library, have proved especially popular. Programs are presented the country over in dealers' showrooms, by means of Bell & Howell Filmosounds.

Talkies Help Sell Life Insurance

LIFE insurance prospects, too, are susceptible to the persuasiveness of sound motion pictures, according to the experience of the Illinois Standard Mutual Life Association. This company uses Filmosounds for entertaining audiences with comedies, cartoons, and feature films. Announcements are made by the operator through the Filmosound microphone and speaker, and dance music is played from records through the microphone jack. The company reports that "the results have been exceedingly gratifying, particularly in small communities."

At the San Diego Fair

AS AT Chicago's recent Fair, automatic continuous motion picture showings are being used extensively at the San Diego exposition. U. S. Government exhibits, particularly, will feature motion pictures. The national parks, the work of the C. C. C., and the post office functions are presented clearly with sound and silent movies. The Boulder Dam concession attracts patrons with Filmo movies at the entrance, using films by Ben Glaha, official photographer at the dam.

Among industrialists using continuous movies at San Diego are General Electric Company and Western Sugar Refinery. The latter firm's film, "White Treasure of the Sea Islands," produced by Pat Dowling and Hobart Brownell of Hollywood, contains a unique sequence of a miniature theater in which children animate puppets of sugar, while sugar refinery pictures are shown with a B & H Projector. "White Treasure" is being shown in a 200-seat hall with a B & H Filmosound.

Athlete Gives Credit to Movies

KEITH BROWN, Yale's champion pole vaulter and high jumper, is quoted in Literary Digest for March 16, 1935, as saying in explanation of Yale's record in the pole vault, "We have had the benefit of excellent coaching, and slow-motion pictures have been used a great deal." Enlightened athletic coaches the country over are finding movies a medium of readily proved effectiveness in perfecting form in sports of all kinds. Golf pros, too, have found the slow-motion camera to be an ideal assistant.



The landing speed and gliding angle of airplanes are determined by the Boeing Aircraft Company with the equipment shown above. Through the wire grid, a B&H Eyemo Camera films the landing plane. As the eamera makes precisely the predetermined number of exposures per second, the plane's speed can be computed from the film

Many Filmos Used at American Medical Assn. Convention

INCREASING appreciation of the value of movies to the medical profession is evidenced by the fact that, at the recent American Medical Association convention in Atlantic City, 63 motion picture projectors were used in the scientific and technical exhibits, as compared with 26 projectors a year ago. Of the 63, 43 were Bell & Howell Filmos. Several continuous projectors were used, and the Bell & Howell Filmosound was represented.

New! 1000-Watt FILMOSOUND

16mm. Sound-on-Film Reproducer

Provides ample sound volume and picture brilliancy for large auditoriums

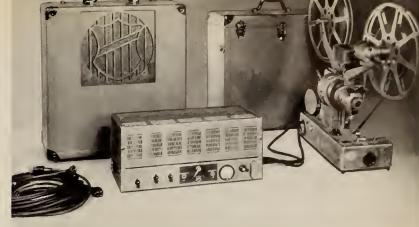
THE new B&H 1000-watt Filmosound, Model 130, has been developed to provide the sound volume and picture brilliancy required for presenting 16 mm. talkies before audiences numbering into the thousands.

Its projector is the Filmo Auditorium Projector, and includes clutch, motor-driven take-up and rewind, 1000-watt lamp, lamp rheostat and volt-meter, and all the

other features of the corresponding silent projector, plus a sound head and cables for making connections with the amplifier.

The sound head is similar to that which has proved so successful on the 750-watt Filmosound. "Flutter" is banished by a theater-type mechanical filter.

The amplifier has an exceptionally high power output—normally 25 watts, with peaks reaching a value of 75 watts. Tubes of the latest type are used. There are nine tubes in the amplifier and one in the speaker case.



B&H 1000-watt Filmosound, showing amplifier and projector in foreground, speaker at left rear, and projector case at center rear. The amplifier is carried in the speaker case.

Provision is made for operating two projectors, with the necessary change-over controls. Sound and picture are

changed from one projector to the other with a single control. Controls are provided for line voltage, film sound volume, microphone volume, and tone.

The high fidelity speaker has unusual frequency response and power handling ability. There is provision for multiple speaker installations.

The 1000-watt Filmosound is intended for semi-permanent installations in auditoriums, but is housed in two cases so that it may be transported. Full details will be supplied on request.

A few of the many Users of Batteries of FILMOSOUNDS

Chrysler Motors Corp.
Dollar Line
Fisher Body
Ford Motor Co. of Canada
Intertype Corporation
Plymouth Motor Corporation
Pontiac Motors Corporation
Portland Cement Association
E. R. Squibb & Sons
Standard Oil Co. of Ohio
Westinghouse Electric Corp.

The B&H 750-Watt FILMOSOUND



POR showmanlike presentations of 16 mm. talkies before audiences of a few or a thousand, the B&H 750-watt Filmosound offers the easy portability required by commercial, school, and home users. Because of its true theater quality in sound and picture, its simplicity of operation, and its constantly dependable service, it is the choice of hundreds of 16 mm. sound film users, of whom a few are listed above. The sound system gives a full range of undistorted volume, from a whisper to the volume required for an auditorium. Uniform speed, vital to perfect sound quality, is assured by an electrically governed motor, power-driven sprockets on both sides of the sound drum, and a perfected theater-type mechanical filter. The Filmo 750-watt picture projection unit guarantees brilliant, steady, flickerless pictures. Quickly set up, easy to use, economical to operate. Write for details.

BELL & HOWELL COMPANY

1812 Larchmont Ave., Chicago

New York . . Hollywood . . London B&H Co., Ltd.)

Romance of Pioneering

(Continued from page four)

in Chicago. There the obliging editor of Filmo Topics had them processed, radioing me:

TESTS GRATIFYING STOP EXPOSURES UNIFORMLY GOOD INCLUDING SOME FINE CLOUD EFFECTS.

Well, this was good news, but accustomed for years to working with the substantial Eyemo and its standard film, I had difficulty in adjusting myself to its younger brother, the Filmo, so small and light, with its dainty little rolls of film. At any rate, even though associating 16 mm. with some of the dismal "home movies" I had seen, I resolved to avoid the too frequent errors of many amateur cinematographers-chief among them being an apparent disregard of timing, of adequate footage for a sequence, of composition, and, above all, their scorning of tripods, preferring to wave the camera around as if it were a garden hose.

The summer wore on. Down north I went on a dynamite-laden barge, twisting and turning in swift water, impinging on sand bars, becoming enmeshed in turbulent rapids; then aboard an airplane, soaring through the air with the greatest of ease-to Coronation Gulf on the Arctic Coast to revisit my old friends the Copper Eskimos; then to the mining camps of Great Bear Lake, examining concentrating mills, and piles of pitchblende and silver ores and concentrates worth hundreds of thousands of dollars, and down into shafts and tunnels to gaze in awe at veins of shimmering silver a yard wide. Underground, on the surface, on the water, in the air-and both day and night, for it was contiguous to a land of the midnight sun-the Filmo was at my side or clapped against my forehead, purring as steadily as the Eyemo had done before it.

At last, in September, the power boats and barges were delivering precious crates, barrels, and boxes, of mining machinery, gasoline and fuel oil, dynamite and foodstuffs to the camps of Great Bear Lake, then taking aboard southward-bound consignments of pitch-blende and silver concentrates. Overcoming all obstacles they had blazed a 1,500-mile water trail from "the end of steel" to the sub-Arctic, accomplishing a miracle of modern pioneering and demonstrating to the world that the vast mineral

wealth of Great Bear Lake was not unattainable.

My Filmo had recorded the whole story. There had been no other motion picture cameras on the historic trek; on the Filmo rested the entire responsibility as visual archivist.

I flew south, eager to have my 2,500 feet of film processed. A few days later in Ottawa, Ontario, it was screened. To my infinite astonishment and delight, I realized that the photographic quality, on the whole, was superior to that of any of my previous pictures. When I had finished editing the film it was 2,000 feet in length. Of the 500 feet that were discarded only a few were technically below standard; the rest just didn't fit into the continuity.

The completed film was called The Last Frontier, or Modern Pioneering. To preserve the original, duplicates were made, and with these I have since lectured more than a hundred times, from coast to coast in Canada, and in the United States.

And the sequel to all this is that the 16 mm. film I once scorned has proved a godsend. Whereas, formerly, my lecturing activities were jeopardized by noisy, undependable projectors and incompetent operators, not to speak of big cans of 35 mm. film like millstones around the neck, they are now made pleasurable through the use of never-failing, quiet, self-operating Filmo Projectors. Moreover, my newly acquired Filmo 129-B Projector, with its 750-watt lamp and 1,600-foot reels, enables me successfully to screen 16 mm. film in almost any hall, however large it may be. If required to lecture in an auditorium where a screen of heroic proportions must be filled from a distance of 100 feet or more, as in Chicago's Field Museum of Natural History a short while ago, I can always secure a 1,000-watt Filmo. My projection worries are over.

Thus, through Filmo's witchery, this old movie-making scribe and lecturer has been weaned away from standard film.

THE Fifth Annual Convention of the Biological Photographic Association will be held at the Stevens Hotel, Chicago, September 12 to 14. Details may be had by writing Mr. Ralph P. Creer, Chairman of the Program Committee, Box 266, Hines. Illinois.

16 mm. Film Serves Audience of 4000

A LECTURE recently presented under the auspices of the National Geographic Society before 4,000 people in Constitution Hall, Washington, D. C., was illustrated with 16 mm. motion pictures shown with the new 1,000-watt Filmo Auditorium Projector, Model 130.

"We gave what we consider a most satisfactory projection," is the word that comes from the Society. "The distance of throw from booth to screen was 140 feet, and the picture was 'blown up' to a width of 22 feet. We asked our lecturer to make a comment on this from the platform, which was done; but in all probability most of those in the audience would not have known the difference from the customary projection of standard 35 mm. film."

Until Bell & Howell developed a 1,000-watt 16 mm. projector, lecturers using motion pictures considered it necessary, in large auditoriums, to use 35 mm. film. Now they can use 16 mm. film practically anywhere. Furthermore, they can "shoot" their films on 16 mm. at much less expense.

The 1,600-foot film capacity of the 1,000-watt Filmo Projector gives the lecturer an hour's continuous showing—just about enough for the average lecture film. An operator is not absolutely necessary.

Notables Choose Filmos

MANY well-known names have appeared recently on Filmo registration cards received at Bell & Howell head-quarters, indicating that Filmo remains the choice of the discriminating. Among those who have recently bought new B & H cameras and projectors are:

H.R.H. Prince Gustav Adolf of Sweden
H.H. The Maharaja of Patna State, India
The Heir Apparent of Bikaner, India
Tatsuichi Okamoto, Matsuyama, Japan,
American Cinematographer contest
prize winner
Gene Sarazen, golfer

Gene Sarazen, golfer
Johnny Farrell, golfer
Richard Bonelli, opera star
Carl Laemmle, Sr., Universal Pictures
Frederick March, screen star
Harold Lloyd, screen star
Otto Kruger, screen star
Clive Brook, screen star

For Better SUMMER MOVIES

Filmo accessories which will improve your movies

B&H Photometer

A good exposure meter is almost indispensable. The B&H Photometer is the only exposure meter which takes the reading on the *important* part of the subject, while you see the subject through the meter. It quickly saves its cost by assuring correct exposure for every scene. Model A for Filmos, Model B for "still" cameras. \$15 each. Case, \$2.50.

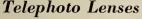


Filmo Weston Meter

This meter uses a photronic cell to measure the light reflected from any photographic subject. Its dial is especially calibrated to give direct readings in F values for Filmo Camera lenses. To use,



merely swing back the cover, point the meter at your subject, read the dial, and set your lens accordingly. Price, \$22.50.



A telephoto lens or two will greatly increase the variety of worthwhile subjects which you can record effectively with your Filmo Camera. These lenses bring distant objects close You'll



distant objects close. You'll need them for movies of birds and animals seen on your vacation trip, of sports and athletic events, and of scenery. Taylor-Hobson telephotos are noted for their crisp definition. 2-inch F 3.5, \$55. 3-inch F 4, \$72.50. 3¾-inch F 3.3, \$90. 4-inch F 4.5, or 6-inch F 5.5, \$75. 6-inch F 4.5, \$115.

Speed Lenses

Taylor-Hobson speed lenses for Filmo 16 mm. Cameras provide the large opening needed to get correctly exposed pictures when the light is weak. Especially necessary indoors, for color movies, and for slow-motion shots. 1-inch F 1.5 or 1-inch F 1.8, \$75.



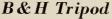
Wide Angle Lens

The Cooke 15 mm. F 2.5 lens solves the problem when space restrictions prevent taking in the entire subject with the regular lens. Covers an area 40% wider, 40% higher, than 1-inch lens. In universal focus mount, \$45. In focusing mount, \$55.



Color Filters

The B&H Combination Filter Set for the Cooke 1-inch F 3.5 lens consists of a filter holder, a slide containing P-2x and P-4x amber filters, and a graduated amber sky filter. Price, with case, \$5.75. S&P-4x green and S&P red filters in another slide mount may be added for \$2.50. Other, separately mounted filters, \$2.50 to \$6.



Built entirely of metal, this tripod is light, compact, and rigid. It insures rock-steady pictures. The smoothly operating head allows combined or independent panoraming and tilting. Quickly set up and taken down. Weighs only 4½ pounds. Telescoping legs extend height to 56 inches. Price, \$27.50. Leather case, \$8.50.



Aplanatic Reflectors

A few Aplanatic Reflectors, for use with inexpensive photoflood bulbs, will prepare you to shoot when and where you please. These are small, compact duplicates of larger reflectors used extensively in Hollywood studios. Mirror-like chromium reflecting surface of many facets. In styles and sizes for every need. Prices range from 75c up. Write for circular.



Titles at 25c

"Title-Craft" titles, neatly typed with a special machine and photographed with ample footage on 16 mm. film, are now available at only 25c each if of 8 words or less. A choice of black or many figured backgrounds is presented by



your Filmo dealer's sample book. Titles on photograph backgrounds selected from the same book are 35c. Dissolves and wipes made to order.

BELL & HOWELL COMPANY

1842 Larchmont Ave., Chicago

New York Hollywood London (B&H Co., Ltd.)

Vacation Scenario

(Continued from page five)

piling. Father stands up in the boat after disentangling a hook from his sleeve and reluctantly exhibits a 3-inch perch. Disappointment is registered by family. Mother turns away in disgust. Bill grabs fish and wriggles it in sister's face.

Scene 32. Close-up of Mother's hands opening a can of beans and dumping into pan.

Scene 33. Fade into storm cloud scene. Use 4x or, better, red filter for thunder heads with full sunshine on them, or 2x, or graduated sky filter, for ordinary cloud bank where sunlight is hazy or partly obscured. This is a chance to get some spectacular effects reflected in water. Be careful not to over-expose.

Scene 34. Rain. The family huddled on the porch, in coats and sweaters, slapping mosquitoes. Father is dejected, slumped in a chair gazing at the water dripping off the porch roof. Mother is darning socks. Emily has read all the movie magazines and doesn't know what to do with herself. Bill aimlessly pokes a small turtle around the floor. Mike is asleep. Dissolve or fade to—

Scene 35. Close-up of calendar. Hand tears off, or crosses off, three or four dates.

Scene 36. Close-up of wet pile of empty cans. Another bean can falls onto the pile.

Scene 37. Close-up of open suitcase on table or bed. Mother's hands are putting in articles of clothing.

Scene 38. Medium close-up of family emerging from door of cottage carrying bags and bundles. Mother carries an open umbrella, a bundle, and the dog. She urges everyone to hurry. Wet the steps and surroundings and throw some water on roof to provide dripping. Shoot this scene on a day when there are scattered clouds in the sky. Judge the particular cloud in front of the sun and start shooting before the edge of the cloud uncovers the sun. Cut before the sun comes out, turn camera toward car, adjust diaphragm for stronger light, and as family reaches car, start on—

Scene 39. As the sun comes out from behind cloud. Everyone looks up in surprise. Uncertainty for a moment. Mother drops Mike, who rushes back to cottage. They look at Mike, then back at sky. Mike decides the question and they all follow his lead. If there is doubt about directing Mike in this action, have Bill remain in cottage and call the dog at the proper moment. And don't forget to wet the car and everything else in camera range, if you stage this scene on a day when there is no rain.

By this time you will have exposed about 370 feet of 16 mm. film, or half that length of

8 mm. film, so let's finish our one-reel feature with a happy ending.

Scene 40. Long shot of beach, dock and lake. The children and Mike are splashing about in the water near the dock. Father, laden with fishing tackle, hurries out onto the dock and jumps into the boat. It has about six inches of water in it, but he doesn't notice. As he unties the painter, cut to—

Scene 41. Middle distance shot, from dock toward lake, of Father grabbing oars and rowing rapidly. Shoot at 8 or 12 speed, so that, when shown on screen, the boat will fairly dash out into the lake.

Scene 42. Scene 40 location. Mother rushes out onto the dock, waving Father's sweater and demanding that he return for it.

Scene 43. From same position as Scene 41. Continue 8 or 12 speed shot of Father and boat disappearing in distance. Fade out.

Missing Equipment

THE equipment identified by the serial numbers listed below is missing, and has not been reported previously. Any information as to its location will be welcomed by the owners, who may be reached by addressing the Bell & Howell Company at Chicago, New York, Hollywood, or London, England, and stating the serial number of the missing unit which has come to your attention.

Filmo 70 Cameras

11,693	27,305	55,570	59,231
20,323	27,334	55,645	60,312
25,067	29,475	56,276	146,683
25,466	35,167	57,390	159,491
27,214	49,773	57,849	

Filmo 75 Cameras

42,606 46 537 151,276

Eyemo Camera

4,348, with lens 149,490

Filmo Projectors

10,084	65,475	151,710—JS
21,327	68,286	154,169
30,013	142,554—57-G	155,207—JS
32,137	142,601—57-G	156,740
63,525	142,613—57-G	156,742
64,521—57-E	150,213—JL	157,876—R
65,227	150,439	160,050

Filmosound

152,911

Accessories

214,411—4" F 4.5 Taylor-Hobson Lens 230,565—Filmosound Converter

Questions and Answers

Conducted by R. FAWN MITCHELL

Color Filters

Q. I was told to use a filter with panchromatic film for haze penetration. Recently I used a 2x filter with this film, and found it to be of little benefit in reducing haze in distance shots.

A. It is probable that your filter was designed for orthochromatic film. Because of the greater range of sensitivity of panchromatic film a heavier filter can be used. A filter rated 2x for orthochromatic film has a factor of approximately 1½x with panchromatic film. We have introduced a series of filters correctly rated for panchromatic film, and recommend the P-4x amber filter for general work with this film. In extreme cases, the red filter might prove useful, though it is primarily intended for special effects. It must also be remembered that distant shots require much less exposure than closeups.

Cave Interiors

Q. Can photoflares be used for taking pictures in a cave, or would the fumes prevent this?

A. Photoflares should be used in well ventilated places only. However, if there is some ventilation, you could probably use halfminute flares, waiting between shots for the air to clear.

Single Frame Exposures

Q. Can an attachment be fitted to the Filmo 70 Camera to allow making single frame exposures?

A. Yes. We can apply to any Filmo 70 Camera a positive single exposure device which will allow for photographing single frames and regular motion pictures, interchangeably. This device is priced at \$45 installed. The installation requires the camera being returned to the factory for a few days.

Model 130

Q. On the new Filmo Auditorium Projector, Model 130, can lamps of lower wattage than the 1,000-watt be used?

A. No. The 1,000-watt lamp is much larger than lower-wattage lamps, and the lamphouse and reflector are arranged to take only this large lamp.

Filmopan 8 mm. Film

Q. How fast is the B & H Filmopan film used in your new Filmo 8 mm. Camera?

A. Filmopan 8 mm. film has about the same speed as the familiar 16 mm. panchromatic reversible films; namely, about 18 or 19 degrees Scheiner.

Filmosound Library Presents



Rev. Sebastian Evers of Kansas City has booked sufficient non-theatrical showings of "William Tell" to keep two prints in constant use for the next two years. This is indicative of the highly desirable nature of this Filmosound Library release. The thrilling and authentic story of the Swiss 14th century struggle for freedom from Austria, masterfully portrayed in 16 mm. sound film

LIJAM BIJ

WILLIAM TELL," exclusive Filmosound Library release, is a dramatic masterpiece. Its world-wide theme of song and story is enacted by famed European screen stars against an authentic background of architecture, character, costumes, and scenery. All of the truly beautiful photography was done in the Swiss Alps, and many of the sturdy old buildings take the same grim part in the picture as they did in the

14th century revolt. Details of life and customs in the days of William Tell are accurately portrayed, by virtue of months of research by the personnel of the Swiss National Museum. This seven-reel film is an ideal program feature for churches, schools, clubs, and, in fact, audiences of any age and character. Running time, 78 minutes. See the information below on how to arrange for a showing.

Selected 16 mm. Talkies . . . entertaining . . . educational

TARZAN, THE FEARLESS

A melodramatic adventure film of daring exploits and thrilling rescues in Tarzan's African jungles. Buster Crabbe is starred. Seven reels.

FIGHTING TO LIVE

A six-reel dramatic feature whose principals are a pair of German Shepherd dogs which are forced to battle, "on their own" in the desert, for their own and their pups' existence.

WINGS OVER THE ANDES

The thrilling picture record of the Shippee-Johnson Expedition by air to the land of the ancient Incas, in Peru. Three reels.

THIS IS AMERICA

A dynamic, timely, thought-provoking portrayal of life in the United States during the past two decades. Six fascinating, fast-moving reels.

TOLHURST NATURE STUDIES

A series of one-reel scientific pictures of insect and animal life, suitable for both classroom instruction and the entertainment screen.

Queen of the Underworld—Life of the ant queen. From Cocoon to Butterfly—A complete life cycle.

Her Majesty, the Queen Bee.

Insect Clowns—Amusing antics of tiny beings.
The Farmers' Friend—The Lady Bug.

Life Cycle of the Ant.

Killers—How the continued existence of many insects depends upon their ability to destroy others.

Beneath Our Feet-How insects live.

Desert Demons—Desert insects' struggle for life.

Battle of the Centuries—Ants vs. Termites.

The Sea—Animal and plant life on the ocean floor.

TRAVELOGS

"Zane Grey's Scrapbook" Series one reel each

Primitive—A young Hawaiian Robinson Crusoe provides food and shelter with the aid only of a knife.

Southern Seas.

On the Blue Pacific.

Isle of Love.

Scenic Travelogs—one reel each

The Wonder Trail-Western U.S. mountains.

The Veldt-African birds and animals.

Highlights of Travel—European and Mexican scenes.

Jungle Giants-African animals.

The Prowlers—Daily life of the Central-African negro.

"CANNIBALS OF THE DEEP" SERIES one reel each

The Trail of the Swordfish—Deep-sea fishing.

Man-Eating Sharks—Adventure voyage to the Gulf of Mexico.

Freaks of the Deep—Strange undersea creatures. Wrestling Swordfish—Men vs. fish.

COMEDIES

Filmosound Library offers a wide selection of one-reel cartoons and one- and two-reel comedies, all carefully selected to be suitable for injecting ten or twenty minutes of good clean fun into any program.

OPERALOGS

Two-reel versions of famous operas, acted and sung by all-star casts.

Milady's Escapade—from "Martha."

The Idol of Seville-from "Carmen."

Vendetta-from "Cavalleria Rusticana."

A Brahmin's Daughter-from "Lakme."

Walpurgis Night-from "Faust."

HOW TO ARRANGE FOR A TALKIE PROGRAM

FILMOSOUND Library branches, where these and many other films may be rented at moderate rates, are located in key cities. These branches are prepared to supply films alone, or with Filmosound 16 mm. sound-on-film projector, operator, and screen, as you prefer.

Write to Bell & Howell Company stating the films or types of films which you are interested in showing, and where and when you wish to show them. We will put you in touch with the most conveniently located branch, and supply you with more complete details on the films which interest you and on others of the same and similar types.

BELL & HOWELL COMPANY Filmosound Library Division 1842 Larchmont Avenue, Chicago

Amazina:

say amateurs who've seen Bell & Howell's new F//MO STRAIGHT EIGHT

"What movies!" say the amateurs. "Who'd think a 1½-pound camera so tiny would make life-size movies with such sparkle and clarity? And how little the film costs! I can take all the movies I want to, with this new Filmo."

Typical Bell & Howell scientific design and precision workmanship, plus the quality of the special Filmopan



film, account for the perfection of Filmo Eight movies.

Go to your dealer's today for a demonstration. There you'll see also the Filmo Eight Projector, and learn how vitally important it is to rock-steady screen pictures that an 8 mm. camera and projector be precisely matched, as in Filmo, as to the method of film registration at the aperture.

Filmo Straight Eight Features

Uses Filmopan 8 mm. panchromatic reversible film at \$1.45 per 30-foot spool. Cost includes processing and postpaid return.

Simplified error-proof loading-no sprockets to thread, no loops to form.

Alarm sounds when the 30 feet of film have been exposed. Footage dial is automatically reset.

Large, brilliant viewfinder with ever-ready auxiliary mattes for two other focal length lenses.

121/2 mm. F 2.5 lens is standard equipment. Other lenses, instantly interchangeable, include 1-inch F 2.7 and 11/2-inch F 3.5.

Four film speeds-8, 16, 24, and 32.

Built-in exposure chart for every outdoor need.

Choice of carrying cases: Model A, with room for 2 films, extra lenses and filters, price, \$6. Model B, for camera alone, price, \$3.

Filmo Eight Projector

Filmo Eight Projector Features

400-watt direct illumination-fills six-foot screens with brilliant pictures.

1-inch F 1.6 lens—unusually fast.

Large sprockets for easy threading; progressively locking sprocket guards; pilot light; adjustable tilt.

Fully gear-driven-no chains or belts.

Manual framer for out-of-frame prints.

Automatic rewind by touching a lever.

Film protected from wear by recessed film handling parts, and by precision film movement mechanism employing edge tension and rectangular shuttle tooth

Aero-type heat dissipating fins, tornado cooling fan, automatic safety shutter for "still" projection.

Operates on 110-volt A.C. or D.C.

Capacity-200 feet of 8 mm. film.

Sturdy carrying case with room for extra reels.

Price, \$125, including carrying case.

BELL & HOWELL COMPANY, 1842 Larchmont Avenue, Chicago; New York; Hollywood; London (B & H Co. Ltd.) Established 1907.

FOR PROFESSIONAL RESULTS

WITH AMATEUR EASE

